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Motor

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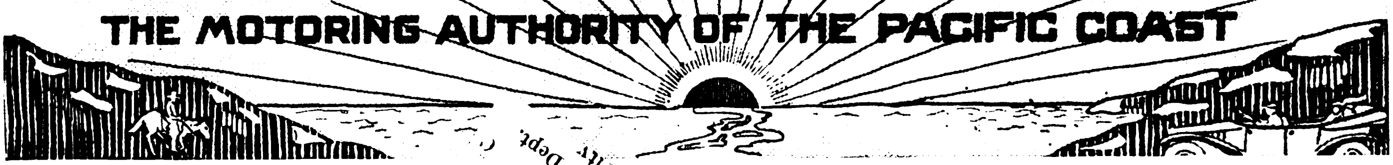
Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST



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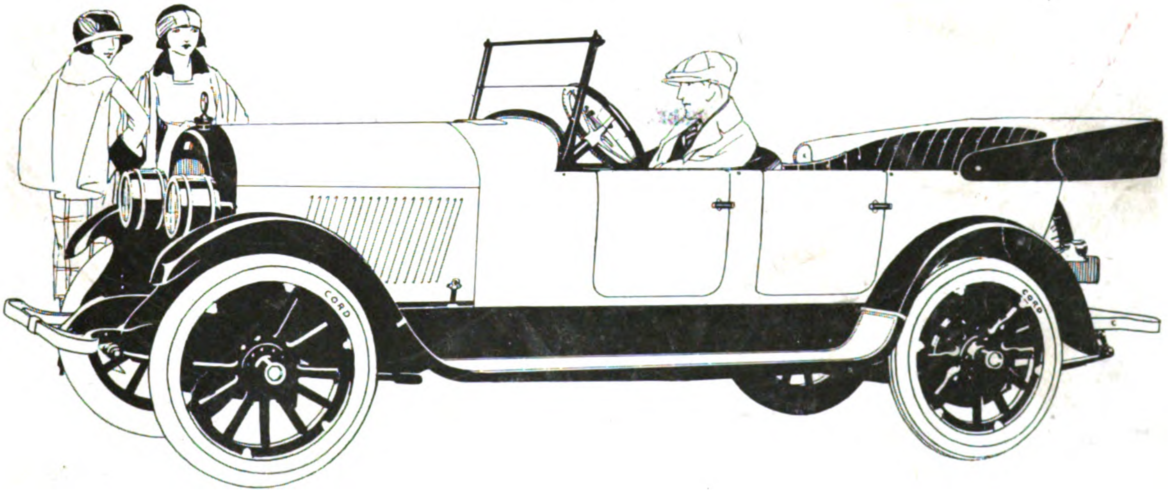
VOL. XXXVII, No. 1 15, 1922 $3.00 A YEAR, 20c A COPY

Vol 37,
Apr 15-
1922

Lexington Leads Because It Lasts!



Built to Stay Young!

The new Series "U" is not a sudden emergency model built as a matter of expediency to meet a recent trade condition. It is a pre-determined product, a logical fruition of a definite program.

It reflects everything which Lexington and its allied factories have been trying to accomplish for years.

And this strictly high-grade car could not have originated in any other way except from our "factory-community" system that controls the source of supply and quality of workmanship, and *effects economies.*

LEXINGTON MOTOR COMPANY, CONNERSVILLE, INDIANA, U. S. A.
Subsidiary United States Automotive Corporation

Lexington
MINUTE MAN SIX

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No. 300

ALBERTSON & COMPANY
SIOUX
SIOUX CITY, IOWA U.S.A.

PATENTED:
Feb. 17, 1914
Feb. 26, 1918
Others pending

SIOUX
Trade Mark Reg. U.S. Patent Office

TOOL SET

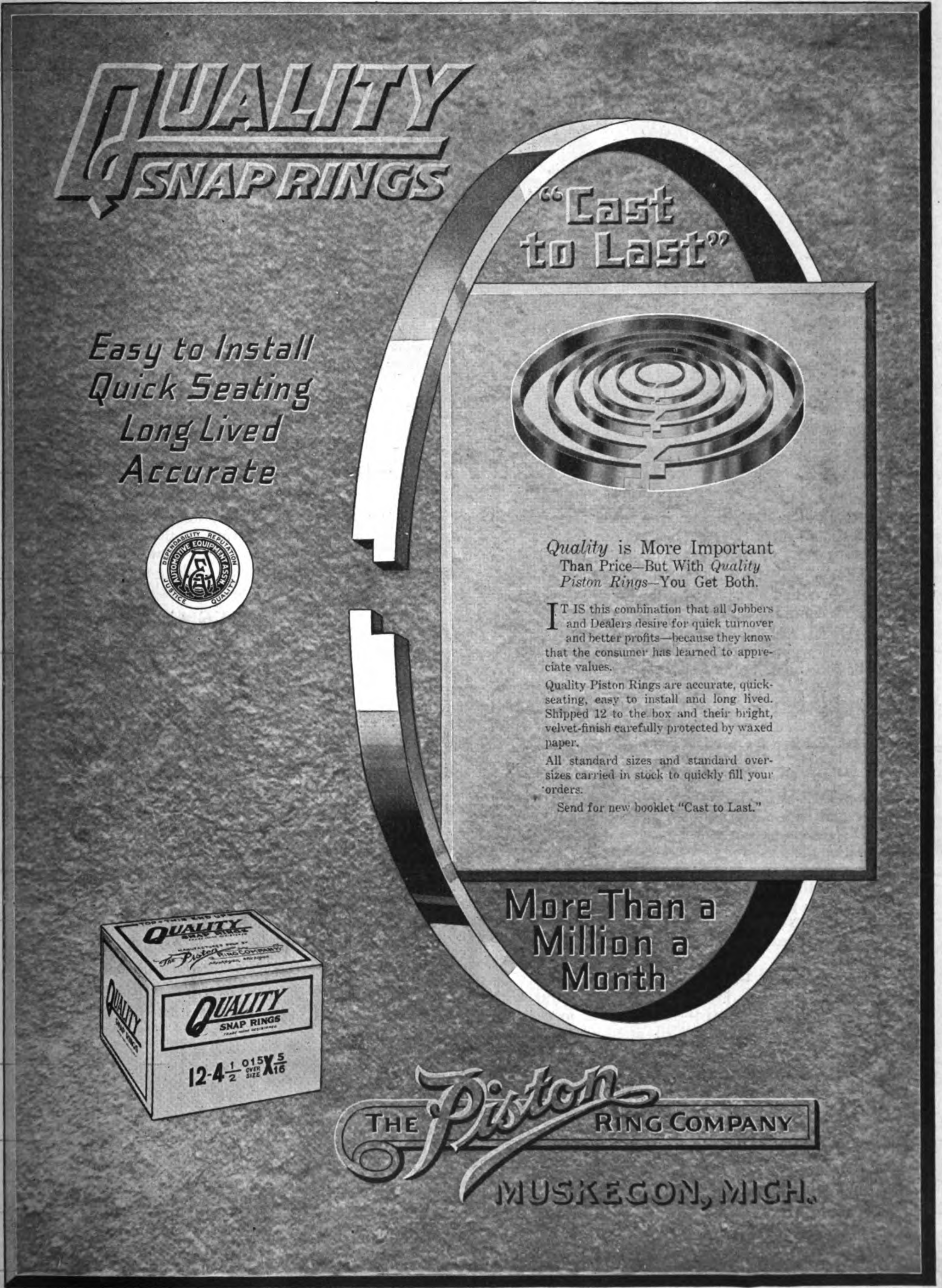
A time-saver, labor-saver and profit-raiser.

You can accurately seat the valves of any standard motor with this outfit and do away with hours of grinding. Valves properly seated require only a few turns of the grinder.

SIOUX SERVICE Keeps the reamers and cutters sharp at no cost to you except carrying charges. When reamers or cutters get dull send them prepaid and direct to us with return postage and they will be sharpened and returned the same day received. We maintain a special department for this service. Demand Sioux Tools if you want Sioux Service.

Jobbers Everywhere Sell Them

ALBERTSON & CO. **SIOUX CITY, IOWA**


QUALITY SNAP RINGS
"Cast to Last"
Easy to Install
Quick Seating
Long Lived
Accurate
DEPENDABILITY REPUTATION
AUTOMOTIVE EQUIPMENT ASSN.
JUSTICE QUALITY
More Than a Million a Month
QUALITY SNAP RINGS
The Piston Ring Company
Muskegon, Mich.
QUALITY SNAP RINGS
12-4 1/2 .015 OVER SIZE X 5/16

Quality is More Important Than Price—But With *Quality Piston Rings*—You Get Both.

IT IS this combination that all Jobbers and Dealers desire for quick turnover and better profits—because they know that the consumer has learned to appreciate values.

Quality Piston Rings are accurate, quick-seating, easy to install and long lived. Shipped 12 to the box and their bright, velvet-finish carefully protected by waxed paper.

All standard sizes and standard oversizes carried in stock to quickly fill your orders.

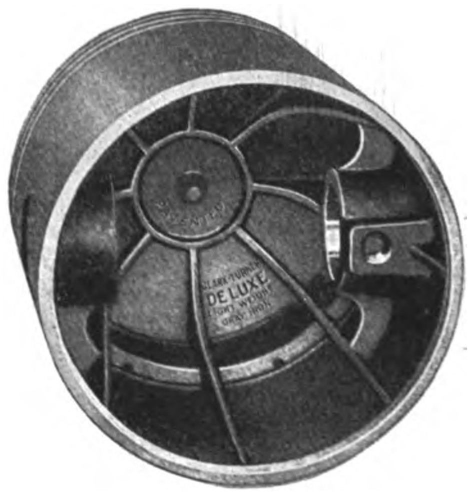
Send for new booklet "Cast to Last."

THE *Piston* RING COMPANY

MUSKEGON, MICH.

How to Sell Pistons

The oil and gas
They've bought and lost,



Would more than pay
The DELUXE cost.

—and What Pistons to Sell

DELUXE light weight cast iron pistons are easy to sell. There are three chief reasons for this.

1st—DELUXE pistons are nationally advertised in automobile papers and in the Saturday Evening Post. You'll seldom find a motorist who hasn't heard something good about DELUXE pistons.

2nd—DELUXE pistons are unique in appearance. It is easy to show prospective customers the difference between the construction of ordinary pistons and DELUXE pistons.

3rd—DELUXE pistons make good. Every sale you make makes the next sale easier because every user is an enthusiastic booster for DELUXE pistons.

How to sell DELUXE pistons

Keep a DELUXE piston on your counter ready to show customers. Memorize the unique talking points about DELUXE pistons:—More power; greater speed; less vibration; less gas; less oil (these first five points are on account of the fact that DELUXE pistons are 40 to 50% lighter than ordinary stock factory cast pistons). No gas leakage past the pistons; no oil pumping; no loss of compression (these three points because DELUXE pistons can be fitted very close without binding or scoring as they radiate heat rapidly, hence expand at the same rate as the cylinder walls).

Remember,—you can prove all these statements with any DELUXE equipped car,—so look your man in the eye and tell him the facts. Call attention to the reinforcing ribs in DELUXE pistons. Show how they extend from a reinforcing ring in the head, across the head and down the sides. Tell how these ribs give strength where strength is needed, and yet enable DELUXE pistons to be made very light.

Sell DELUXE pistons

Sell DELUXE pistons. Cash in on our advertising; on the demonstration value of DELUXE pistons; on the record DELUXE pistons have made for satisfactory results.

Every day we are adding new garage men and accessory dealers to the long list of DELUXE enthusiasts,—men who believe that it isn't worth while replacing pistons unless you use DELUXE.

Sell DELUXE pistons because they are easy to sell, because they make good; because you can get them for over 1400 different makes of motors on 24 hours notice or less.

All good things are imitated, but look inside for the name "DELUXE." It is there for your protection.

DELUXE pistons and coreboxes for making the same are thoroughly protected by U. S. and foreign patents. We intend to vigorously defend our rights and prosecute all infringers.

DELUXE
LIGHT WEIGHT CAST IRON PISTON
The Successful Light Weight Piston

Patented and Manufactured by

Clark-Turner Piston Company

INCORPORATED
Los Angeles, California

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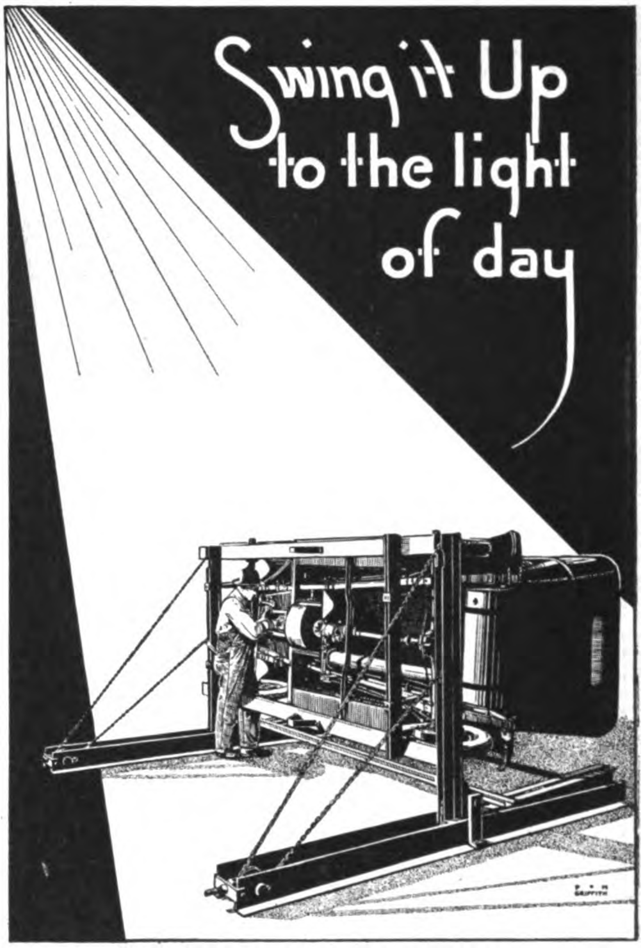

Swing it Up to the light of day

The Gartner Work and Display Stand

Better and Quicker Repair Service

Better and quicker repair service is possible with the Gartner Work and Display Stand, because it swings the car into the best possible position for your mechanic to see and reach his work. It eliminates physical strain and allows him to deliver the maximum of productive time daily.

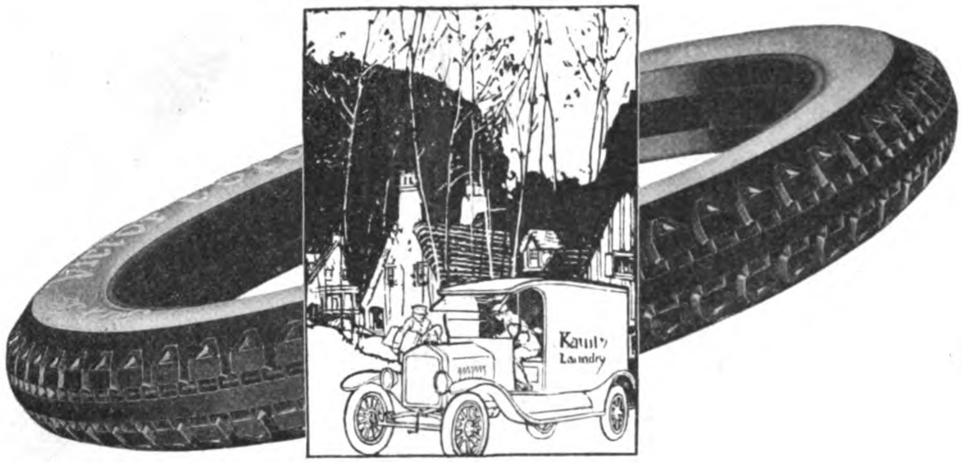
With the work in plain view your mechanic, working in a natural position, will complete a job in one-half the time ordinarily required. This enables you to render quicker service at the lowest shop cost, and give complete satisfaction on every job you handle.

We have a plan that enables you to install a Gartner Stand now. Write today for this plan.

GARTNER'S STANDARD GARAGE EQUIPMENT CORP.

Manufacturers and Patentees

611-612 Balboa Bldg., San Francisco, Cal.



Victors in the Light Car Field

Victor dealers are making big sales to operators of light delivery cars.

Ideally suited to this exacting and continuous service the Victor 30x3½ Clincher Cord is giving complete satisfaction to users and bringing profit to dealers.

You can get your share of this business with Victors. Let us show you how.

THE VICTOR RUBBER COMPANY
Makers of Rubber Tires for 23 years
SPRINGFIELD, OHIO

Victor Tires

MILEAGE Victors

MILEAGE Victors

THE WORLD'S BEST
THEY STAND THE TEST
HAYES
WHEELS
WOOD WIRE STEEL

Increase Your "Turnover"

A new and easy way for Dealers to Make More Money

Send in Extra Profit Coupon To-day

DEALERS—What would you say to a new plan that would enable you to make an extra profit without adding to your present expense—reach a wide and ever increasing market? That is exactly what you can do—*Sell Hayes Demountable at the Rim Wire Wheels.*

Here are some of the features you can offer to every owner of a Ford, Chevrolet, Earl, Durant, Nash, and other cars. Hayes Wheels, demountable-at-the-rim, are easy to install—interchangeable with ordinary wood wheels.

Complete set consists of only four wheels and rim, instead of the usual five complete wheels. This saves weight of extra wheel and special wheel carrier—saves money—saves time in tire changes—insures absolute safety. Most important of all, it allows you to sell for considerably less—and our liberal commissions allow you to make considerably more money per sale.

You know what Hayes means—dependable wheels—backed by the largest wheel manufacturing organization in the world. The tremendous resources of this organization are back of Hayes Demountable at the Rim Wire Wheels—back of you when you sell them.

This is just the opportunity you want—but you must be *first in your town.* Mail extra profit coupon for complete plan, literature and new selling plan.

Six Strong Selling Points

1 One-piece steel felloe, of channel steel, well adapted for assembly of the wire spokes and gives perfect support to the rim.

2 Rim supported front and back by in-rolled bead, excludes dirt. Providing ideal attachment for lugs.

3 Demountable rim lugs permanently attached to rim, eliminating driving studs.

4 Lugs are made from mill-rolled bars. Riveting portion integral with lug. No castings used.

5 Tapered nuts, fit counter-sunk holes in lugs and act as lock-nuts.

6 Integral hub makes wheel interchangeable with wood wheel.

HAYES WHEEL COMPANY *of New York* **JACKSON, MICHIGAN**

Branches: New York Chicago San Francisco Indianapolis

Stocks Carried In Principal Cities

HAYES WIRE WHEELS
DEMOUNTABLE AT THE RIM

EXTRA PROFIT COUPON

The Hayes Wheel Co., Jackson, Mich.

GENTLEMEN:—

Show me why Hayes Wire Wheels are sure-fire sellers—how I can sell them for less and make more money. It is understood that this places me under no obligation.

Name ______________________

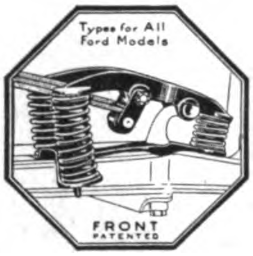
Address ______________________

City ____________ *State* ____________ F7

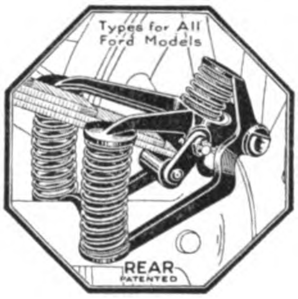
NOTE:—If you are not a dealer, and want to purchase a set, we will be glad to refer your inquiry to the nearest dealer handling Hayes Wire Wheels.

BURPEE-JOHNSON Products
INDIANAPOLIS, U·S·A·

Each Burpee-Johnson product meets the high standards set by the Ford organization. Give added satisfaction and service to the world's Greatest Automotive values—the Ford car, the Ford truck and the Fordson Tractor.



The "third spring" checks the rebound and sideway. Guarantee against spring breakage.



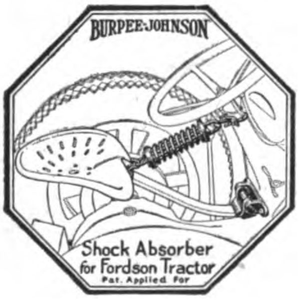
FloatAforD SHOCK ABSORBERS

For Passenger Cars and Trucks

Do not clamp the Ford springs in any way. They work both going and coming for your comfort. The only type which has the triple spring. The downward thrusts are absorbed by the coil springs.

The "third spring" absorbs the rebound and checks the sideway. This feature exclusive with FloatAforDs makes them superior to all other makes. Correct in principle.

Types for all Ford models. Special types for external brakes. Guaranteed and sold by dealers on a money back ten day trial.



Burpee-Johnson Shock Absorber for FORDSON Tractor

This wonderful new accessory is made especially for the Fordson Tractor. Installed it broadens the field of the tractor, by giving added comfort to the driver, thus insuring a greater day's work from the tractor. Bumps and jars from the rough ground in fields or on highways are absorbed and the driver remains on the job. Every Fordson owner wants one. Order one today. No holes to drill, easily and quickly attached. If your nearest Fordson dealer cannot supply you, write us direct.

Dealers—Here is your opportunity for business in 1922. Big profits, quick sales and satisfied users. Get this franchise for your town. Write us today.

Western Distributors and Territory

General Service Co., 1500 S. Hope St., Los Angeles,—Southern California.
C. M. George, 357 Van Ness Ave., San Francisco,—Northern California, Nevada, Hawaiian Islands.
Ballou & Wright, 1515-12th St., Seattle, Wash.
Ballou & Wright, 89-95 N. 10th St., Portland, Ore.—Washington and Oregon.

Wait for This

In the near future, the new automatic Lock tilt steering wheel will be announced.. Watch for it.

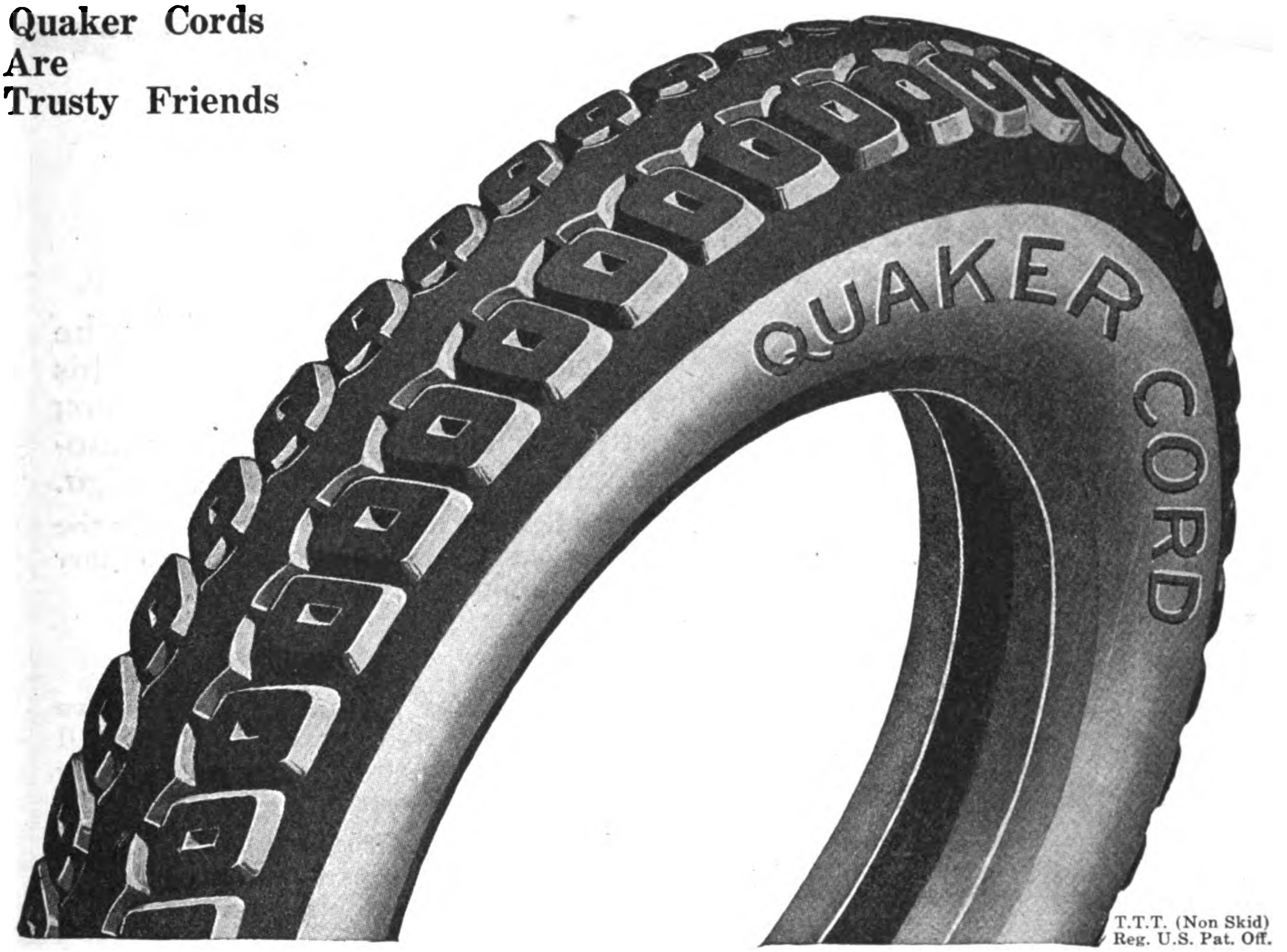
BURPEE-JOHNSON CO.

Manufacturers

1918 Singleton Street
Indianapolis, Ind.

Canadian Office and Factory: Automotive Products Co., Ltd.
510 King St., East Toronto

Quaker Cords
Are
Trusty Friends



T.T.T. (Non Skid)
Reg. U.S. Pat. Off.

Security

LIKE the foundations of a monster building, Quaker Cords are demonstrating to car owners what tire satisfaction really means. It is not what they expected, but what they actually secured in service and mileage which has created the present enormous demand for Quaker Cords.

If there is no Quaker dealer in your immediate locality, write for our selling proposition at once.

QUAKER CITY RUBBER COMPANY

Established 1885 **Factories—Philadelphia**

TIRE SALES DIVISION
1664 Broadway, New York

Philadelphia
624-26-28 Market St.

Chicago
182 W. Lake St.

Pittsburgh
211 Wood St.

New York
53 Murray St.

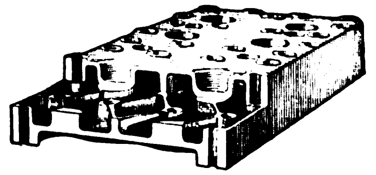
Pacific Coast Office, 304 Williams Building, San Francisco

Watch the trend—

Of the 135 models offered by the 69 leading French car makers this year, 106—or 78.5%—are *Fours;* while 77% of all British-made automobiles are of four-cylinder design.

In the light of recent developments in the motor car industry this trend to *finer* Fours should not be overlooked.

STUTZ TAKES THE LEAD

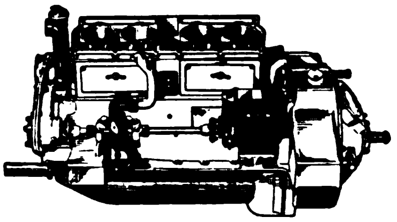


Girder-type Cylinder Head, Showing Internal Reinforcements

American motor car manufacturers have come to realize that more is to be gained from greater refinement of design than by multiplication of parts.

And of them Stutz is the *first* to meet conditions without compromise with a car that satisfies completely the needs of the day.

"D-H" ENGINE REVISES FORMER STANDARDS

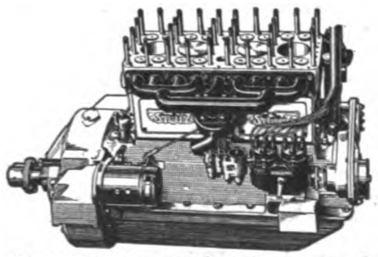


Sectional View Showing Water Passages of Inter-circulating Cooling System

The Stutz—with the "D-H" Engine and Compensating Spring Suspension—now heralds a new era in motor car building.

Experts concede that its performance is on a parity with anything previously attained by intricate multi-cylindered mechanisms, while its simplicity and accessibility give it exclusive distinction among finer cars.

OPERATING EFFICIENCY PHENOMENAL



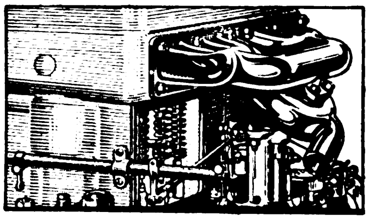
"D-H" Engine With Cylinder Head Removed, Showing Valve Arrangement

Vibration is nullified at all speeds from 5 to 90 m. p. h. Power is increased 65% with an increase of 45% in torque.

Fuel economy is increased 20%, reaching its peak at from 20 to 40 m. p. h. and maintaining its greatest efficiency through 40% of the entire speed range.

Acceleration from 10 to 60 m. p. h. is increased 90%. The speed range has been increased 40%.

A REVELATION IN COMFORT

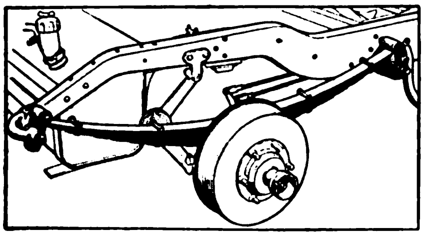


View Showing Composite Intake System. Valve Cover Plates Are Removed

The Compensating Spring Suspension increases spring resiliency 75% and creates perfect road balance under all conditions.

The arrangement of the driver's compartment, the ease with which clutch and brake pedals operate, the convenience of the controls make driving the "D-H" motored Stutz free from all laborious effort.

Here is a car with which to meet present business conditions—



Compensating Spring Suspension. Note Unique Spring Attachment

The Stutz—with the "D-H" Engine and Compensating Spring Suspension—is just the sort of car with which to meet impending conditions in the motor car business.

Dealers in small and large communities, alike, will find it a boon in overcoming the difficulties they have encountered in the past.

Our new selling plan is one of the soundest so far devised. Our present financial strength fortifies every dealer associated with us.

Stutz now offers an opportunity in many localities which is rarely afforded in the automobile business. It will pay any forward-looking dealer to investigate. Write or wire.

STUTZ MOTOR CAR COMPANY OF AMERICA, *Inc.*
Indianapolis, Indiana, U. S. A.

STUTZ

THE CAR THAT MADE GOOD IN A DAY

Bridgeport No. 16

for all size tires

Cylinder

Seamless Drawn Brass will not rust. Perfectly finished inner surface insures smooth, easy operation of piston, and prevents excessive wear on leather bucket.

Piston

Equipped with patented bucket expander which automatically operates bucket under all conditions. High compression insured.

Other Features

Leak-proof base connection
Check valve in base
Thumblock hose connection
Three ply long hose
Full grip handle

Easy Sales

because the superior features of the pump are obvious and quickly appreciated.

Appearance

clearly indicates the excellence of construction.

Performance

Superiority in construction details means better performance.

Guarantee

on material and workmanship protects you in your replacements.

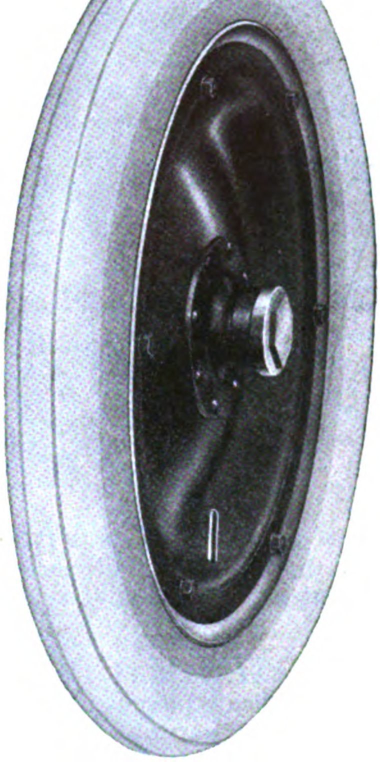
List Price, $3.75

with liberal discount to the trade. Write for our sales proposition.

RUST-PROOF
LEAK-PROOF
Better-Built

Bridgeport Brass Company
Bridgeport 2315 **Connecticut**

Motor Wheel
PRODUCTS



Ahead!—with Every Betterment

TUARCS were first with the outside valve stem, because Tuarcs were first with the double curve design—the basis of steel wheel improvement.

With this pioneer leadership Tuarcs are logically looked to for the highest development of the steel wheel.

It was Gier Tuarc Steel Wheels which eliminated all need for special hub parts, an economy feature of equal value to manufacturer, dealer and user.

It was the Tuarc double-curve design, perfected with Gier stamping facilities, that made possible the *one-piece* steel disc with regulation demountable rim.

There is no problem of attaching a special carrier for spares, either at the factory or in the garage. The need for only four wheels further reduces the cost of equipping with Tuarcs.

All these points of practicability and economy reinforce the popularity Tuarcs have gained for their strength and beautifying effect on any car.

Organizations and individuals capable of handling the wholesale distribution of Gier Tuarc Wheels are invited to make application for exclusive territory assignment

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

MOTORS, EQUIPMENT & TRACTOR CO.
1341 So. Hope St.
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520-37 Van Ness Avenue
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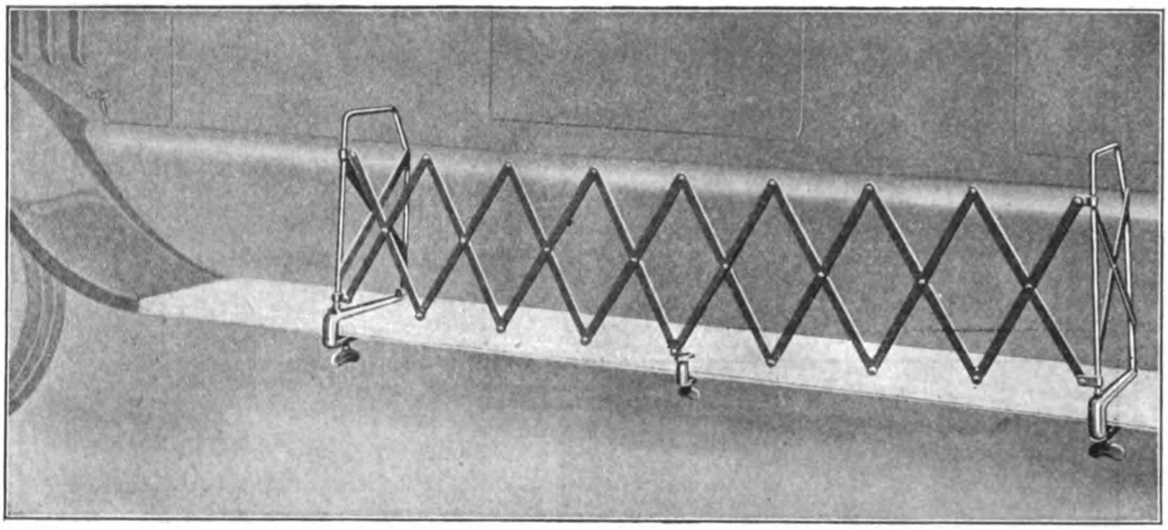
Gier
Tuarc
STEEL WHEELS
—a Motor Wheel Product



STRENGTH AND ROOM TO CARRY MOST ANY LOAD

Compare:

The
COMPACTNESS

Folds up in a very small package. Can be handily put anywhere. Boxed size 18⅜ x 9½ x 1⅞".

SIMPLICITY

Nothing complicated about it. Put on by turning three thumb screws. Loosen two thumb screws and clamp it down.

The
STRENGTH

Drop forged brackets, thumb screws and clips. All joints are washered. Fence made of high carbon steel.

LIGHTNESS

Considerably lighter for its greater strength than any other. Weight 10¾ lbs.

The
APPEARANCE

Clean cut, well balanced design. No cumbersome, unwieldy parts. Finished in baked black enamel—

then you'll buy

PIONEER LUGGAGE CARRIER

(Patent applied for)

Distributors who have seen the Pioneer say it is the best on the market.

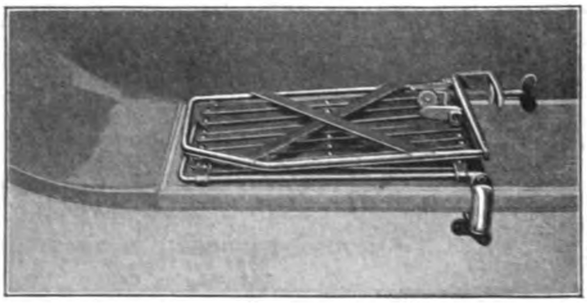
YOU'LL say so, too!

The Pioneer folds up in a compact package and lies flat at front of left hand running board—under driver's door—out of the way.

Or it can be removed and put under the seat. Endgates keep load from shifting forwards or backwards.

Always handy for carrying baggage, farm products, camping outfits, etc.

LIST PRICE $3.50



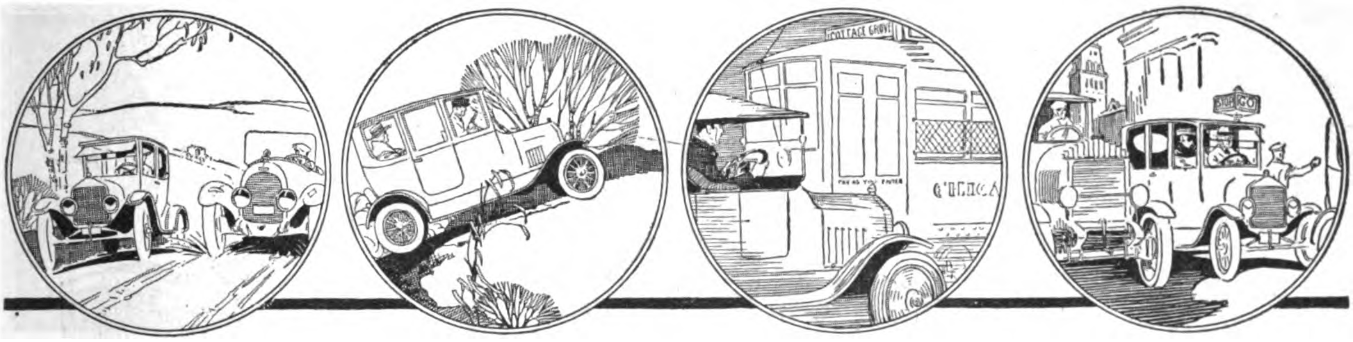
Packed one in a corrugated paper board box

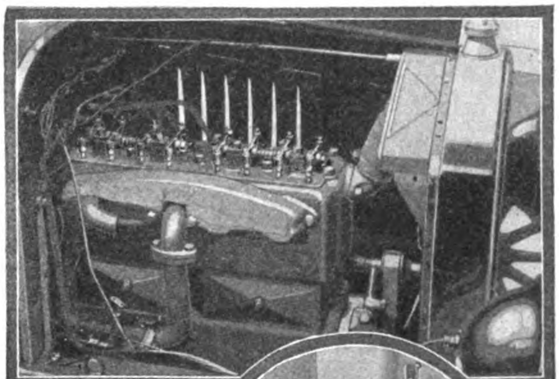
IF YOUR DISTRIBUTOR DOES NOT CARRY THEM NOW, WRITE US GIVING HIS NAME

Manufactured by

THE BREWER-TICHENER CORPN.

CORTLAND, N. Y.





Rajo Valve-in-Head increases Ford power from 8 to 14 Horsepower

The 1922 RAJO national advertising campaign includes full page advertisements in such publications as: MOTOR, FORD OWNER AND DEALER, AMERICAN AUTOMOBILE DIGEST, WESTERN FORD OWNER and space in such popular, widely read magazines as COLLIER'S and SUNSET. There are hundreds of readers of these publications living in your locality who will see our advertisements and wonder where they can buy Rajo Accessories. TELL THEM.

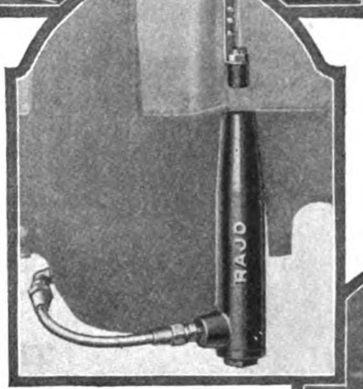
Every Ford Owner Is a RAJO Prospect

WHEN you carry the Rajo line of Automotive Products, every Ford owner is a prospect, no matter whether he has a new Ford or a machine that has seen its best days.

No Ford owner who has a little money can resist the power-increasing and economy appeals of the RAJO Valve-in-Head which gives him from 8 to 14 more horsepower, 25 to 35 miles to a gallon of gasoline, and from 3 to 55 miles per hour in high gear. And the Rajo Oil Gauge, Funnel-Fil Cap, Valve Inspection Doors and Quick Detachable Magneto Plug Container all help him make a better car of his Ford.at little expense—and a good profit to the dealer.

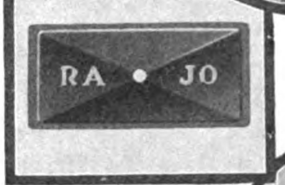
You can "cash in" big on the demand among Ford owners all over the country now being created by Rajo advertising. All this, plus the Rajo dealer helps, make Rajo a highly profitable selling proposition for you. Write for our booklet: "Building Business with Rajo". It places you under no obligation and gives you the full facts.

Automotive Salesmen: Write for our salesman's proposition. It's interesting.



The Rajo Oil Gauge—Sells Easily at $3.00

The Rajo Funnel-Fil Price, $1.25



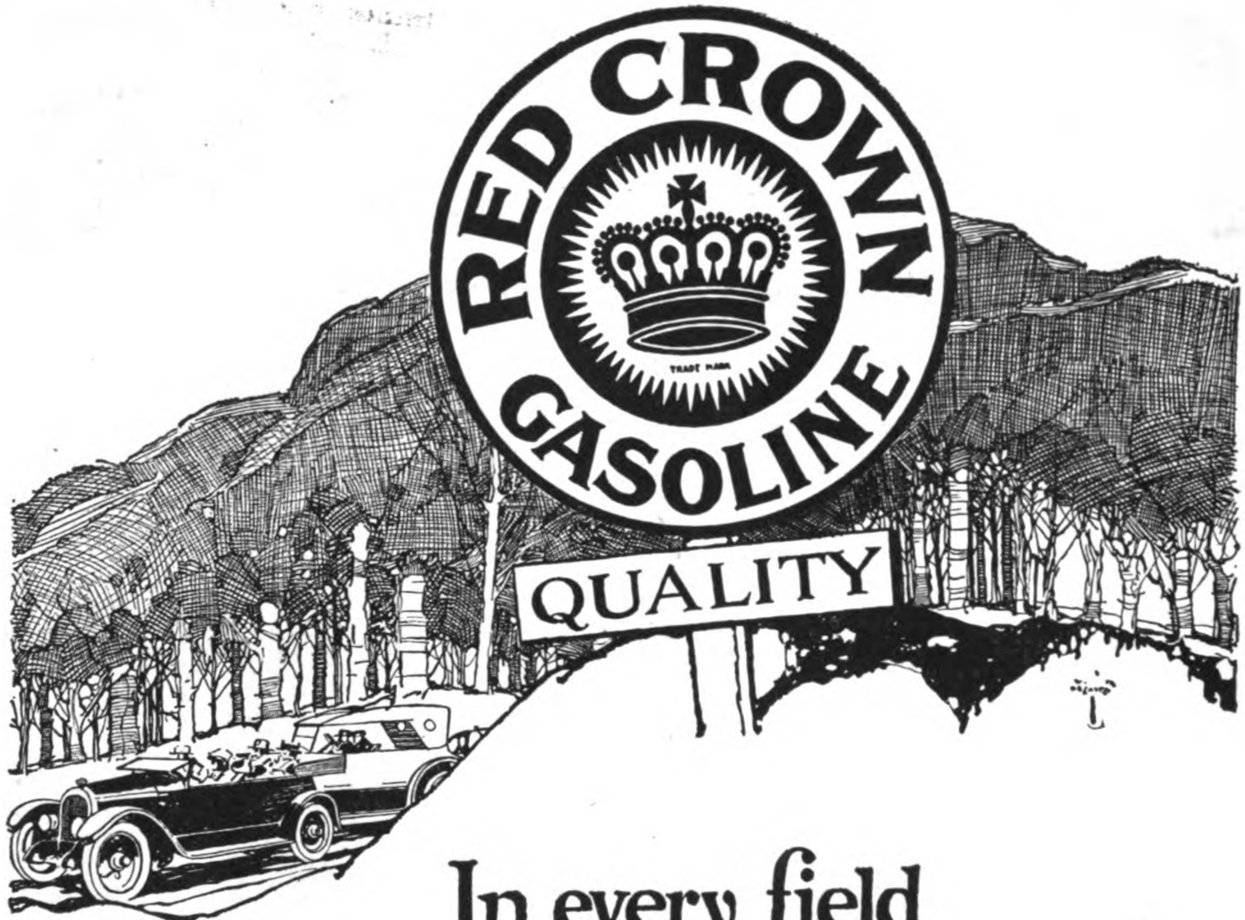
Rajo Valve Inspection Doors pr. $1.00

Rajo Magneto Plug Container Price, $1.00

RAJO MOTOR COMPANY

1361 Racine St., *Racine, Wisconsin*

RAJO ACCESSORIES FOR FORDS



In every field there is a leader /

The uniform high quality of Red Crown gasoline, and the unfailing satisfaction long experienced through its use, have made "Red Crown" the favorite motor fuel, relied upon by the majority of motorists.

With the leadership of "Red Crown" has grown a system of service. At Standard Oil Service Stations you are assured of quick, courteous and efficient service.

Garages, and other dealers, too, sell Red Crown gasoline.

Look for the Red Crown sign before you fill,— the sign that signals "Power and Mileage."

STANDARD OIL COMPANY
(California)

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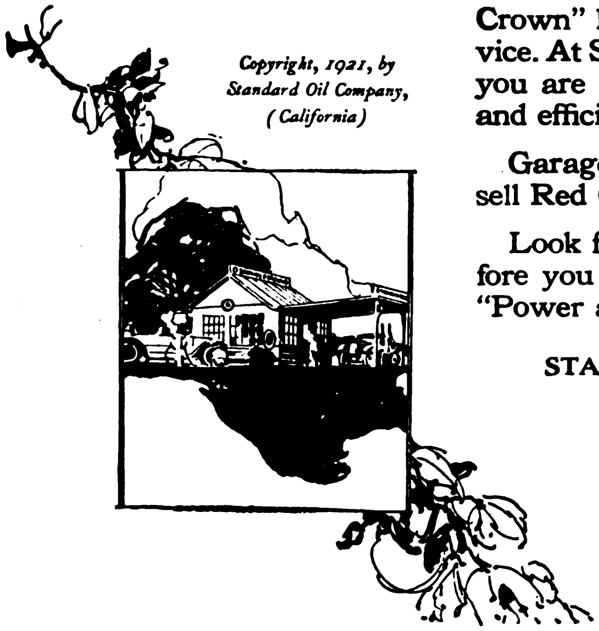
(California)



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MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII. No. 1 APRIL 15, 1922 $3.00 PER YEAR

INSURANCE BY AN IMPROVED METHOD

State of Washington Plan to Protect Passengers and Shippers More, Yet Reduce Cost of Premiums.

New blanket insurance policy and surety bond forms have been drawn by the Department of Public Works in the state of Washington to cover motor transportation. It is believed this will reduce the premiums for operators and still serve as protection to passengers and shippers.

Under the old policy each car had to be insured and no provision was made for extra cars brought in to accommodate the public and for emergencies. In addition, the policy covered operation in any part of the United States or Canada.

Recently a meeting with insurance men was held at Olympia, and Department of Public Works officials broached the subject of a uniform policy or surety bond, designed especially for motor stage operation. A form was submitted to the company representatives. With the assurance now that the larger companies are behind the new plan, the department has embodied its ideas in two forms, one the liability insurance policy and the other the surety bond form.

"The new policies make it possible for a transportation company to insure all its cars," said Riley Conrad, chief of the motor transportation division of the department. "Even in cases where a machine breaks down and it is necessary to use a private car, the passengers or property transferred to that car are protected.

"Another defect in the old plan in regard to the territory the policy covered has been remedied with the provision that the insurance covers the operation on the route specifically named in the certificate of convenience and necessity issued to each transportation company. As an operator is not allowed the privilege of transferring to any other route, there is no reason why his policy should cover the entire country."

The policy or surety bond is to be filed with the state for the benefit of persons who sustain damage or injury from the negligent operations of any motor vehicles operated by the insured, by virtue of his certificate. Any persons suffering personal injury or damage to property by negligent operation shall have the right of action, the policies state. The schedules adopted and approved by the insurance companies follow:

On each vehicle used for transportation of freight, $5000 for any recovery for personal injuries by one person; $10,000 for all persons receiving personal injuries by the act of negligence; $1000 for damage to property of any persons other than the insured.

On each vehicle used for transportation of persons, 12 passengers or less, the same schedule applies. Where the vehicle carries 13 to 20 passengers, the schedule is the same, except that it provides $15,000 for all persons receiving personal injuries by one act of negligence. Where the vehicle carries more than 20 persons, $20,000 can be collected.

The state of Colorado's highway department has announced that the proposed state road to the summit of Mount Evans will be pushed to completion at the earliest possible date.

A FIRESTONE REQUEST.

Firestone Tire & Rubber Co., Akron, is seeking facts and figures regarding the usefulness of the motor car in business and as an aid to personal efficiency. It would appreciate news of any individual instances, or the figures from any surveys or investigations proving that the motor car is an aid to the conduct of business by saving time or money or by increasing efficiency of individuals and organizations.

NEW SPRING IDEA BY A SPOKANE MAN

Electrically Welded Clips Simplify Making, Add Much to Strength; Bolt Holes Are Eliminated.

The invention of a boltless, electrically welded spring for motor cars and trucks, and railroad rolling stock, is announced by F. J. Laher of the Laher Auto Spring Co., Spokane.

Fully 90 per cent of the breakage of truck and automobile springs occurs at the center bolt, where the spring leaves are weakened by punching holes to accommodate the holding bolt. Mr. Laher conceived the idea of welding a side clip to hold the leaves together, in this way simplifying the manufacturing process and at the same time adding much to the spring's strength. So satisfactory were the results that when he came to manufacture the springs he had discovered by accurate tests that he was justified in placing a strong guarantee on his product, he said.

He also found in his tests and experiments that the electrically welded clips prevented leaves from slipping sidewise from position if the end clips moved out of place. In addition to eliminating the necessity for bolts it was found that lugs and the hump method of making were unnecessary with the new process.

Wilkinson Leaves U. S. Rubber.

Thomas H. Wilkinson has resigned as tire division manager of the San Francisco branch of the United States Rubber Co. after 17 years service with the organization. He is succeeded by H. A. Thompson, recently in charge of mechanical goods and druggists' sundries in San Francisco, and former Seattle branch manager. Mr. Wilkinson was guest at a farewell dinner given by his former associates. He has not yet announced his plans.

Spring is here. Your brakes O. K.?

TOURIST CAMP IS PROFITABLE IDEA

Spokane's Experience in Giving the Visiting Motorist Service is that It Brings Handsome Returns.

Communities interested in establishing free tourists' camps will be interested in Spokane's experience. It is claimed that city receives not less than $5000 a day from motor tourists in the season. The fine camp has many conveniences and last August the average was more than 100 cars daily. A larger number used the hotel service, which is adequate and moderate. A survey of the camp caused the conclusion that the city gets a minimum of $10 from any tourist car.

"We'll leave about $100 in Spokane after a two day visit," said W. H. Wiseman of San Francisco, heading a party of four. "We've spent $70 already, and the women are going shopping again, so you better tack a few more dollars on that $100 ante."

Some expense items mentioned by Mr. Wiseman were: Gasoline, $11.80; a tire, $43; provisions, $14; laundry, $3; Natatorium park and theaters, $6.

C. A. Snyder, Hamilton, Mont., with a party of five, said it would cost the party about $15 for provisions alone.

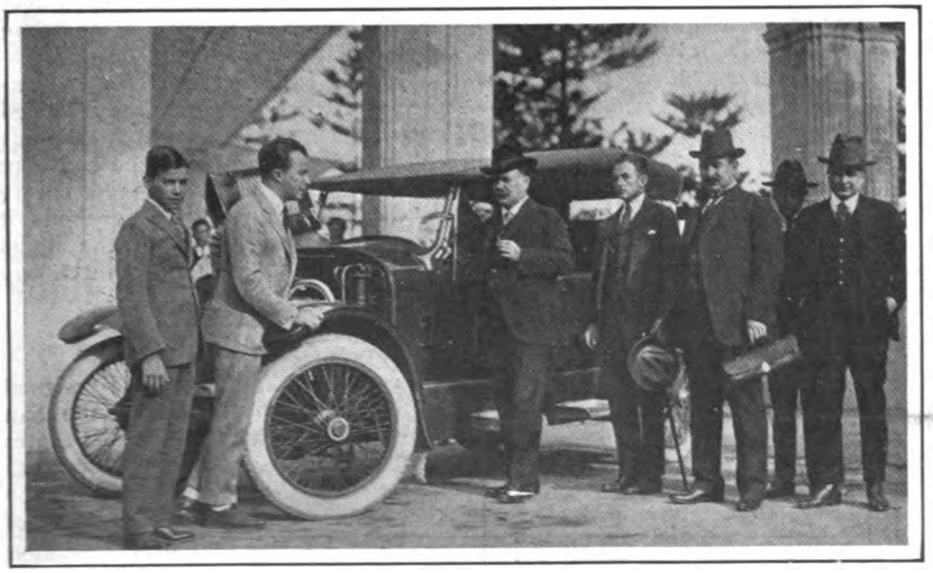
Mr. and Mrs. M. C. Lambert, Milwaukee, put in a supply of groceries which cost more than $10. "And," Mr. Lambert said, "we made a trip uptown last night, when we spent about $5 on cigars, cigarettes, sodas and movies."

F. J. Hanson, Sonoma, Cal., said it would cost him close to $50 for two days in Spokane. He spent $20 for automobile parts, while Mrs. Hanson spent about $25 on a shopping trip. "Let me see," said Mrs. Hanson. "I bought pillow slips, towels and a khaki outfit, which cost about $10. Then I paid $5.30 for films and developing, and spent $8 on groceries."

Motor tourists are beginning to arrive in Spokane from Southern California and other Pacific Coast sections. Some have eastern cities for their destination, but will remain in the Inland Empire until outlets are reopened.

Good road conditions are reported by the tourists except between Weed and Sisson, in the Siskiyou Mountains of California, and between Colfax and Spokane, where snow and ice are the chief handicaps. None of the travelers reported difficulties elsewhere, and most of them did the trip in eight days.

Arrival of tourists in Spokane in steadily increasing volume is expected with the departure of the snow. To inform the coming guests of what is in store for them, the Inland Automobile Association is preparing a map of the Inland Empire playground. The map shows all of the lakes, streams and mountains in an area bounded by Ferry and Lincoln Counties, the Canadian line and Glacier National Park. It is being made on a large scale, so that he who rides may read, and will be ready for distribution about May 1, it is expected.



PRESIDENT OBREGON RECEIVING "MEXICO'S NATIONAL AUTOMOBILE."

"Anahuac," which means "Old Mexico," is the name of a 4 cylinder car designed in Indianapolis and to be manufactured in Mexico City, by Mexicans, for Mexicans, backed by Mexican capital and protected by contemplated tariff against imported cars. The picture shows the completed car, being welcomed by President Obregon at Chapultepec. From left to right—Humberto Obregon (son of the President); Ad. P. Buquor (designer and builder); President Obregon; J. S. Curtiss, El Paso financier who promoted the project; Gov. J. A. Castro of Durango; Captain Garcia, secret service man; Sr. Vey, the President's private secretary.

Sample of Spokane Spunk.

After a tour of three months in snow drifts and rose gardens, H. G. Thompson, automobile salesman, returned recently to Riegel Brothers, Dodge Brothers car distributors in Spokane. Mr. Thompson brought with him a tale of the resourcefulness of Archie A. West, former salesman for the same firm, that saved them and the occupants of 30 other cars from a near-famine and hardship. This occurred at the John Day ferry in Northern Oregon, where the motorists happened to meet, some of them after five days of detouring and with little to eat.

"They found the ferry boat half submerged on the opposite shore and the cable down on our side," says Thompson. "To turn back would have been futile in the face of the storm and we could not remain there.

"West solved the problem. He pulled down a signboard that advertised the Wasco Hotel, several miles distant and on the opposite side of the river, and pushed it into the water. Astraddle of the plank and with a board for paddle, he braved the tumbling water and reached the opposite shore. The current carried him far down the river and to a point a short distance above the rapids, where he would have met his Waterloo.

"On the opposite shore he found a telephone and apprised Judge McKee, mayor of Wasco, of the plight of the party, perhaps 65 in all, including some women. Mayor McKee responded generously, saying he would send food for the party, and a gang of men to repair the ferry. But the men of the party were not of the kind that would wait for help. Although lacking tools, they raised the cable, over which some of them traveled to the other shore. They calked the boat and bailed it out and at 3 p. m. took the first car across. Mr. McDonald, owner of the ferry, which had been suspended for the season, refused to accept pay for the use of his boat; and the beefsteaks, sandwiches and coffee, provided by Mayor McKee and the Wasco folk, and prepared by the women of the party, had the real oh-boy flavor."

Bad Crossing Eliminated.

One of the bridges at the west end of Altamont Pass, over the railroad tracks, one of the most dangerous crossings in California, has been completed. California Highway Commission has laid the approaches to the bridge and from present indications it will be open about April 25.

If you want to see new towns with wide streets, the Far West is the one part of the country where that kind of town predominates.

TABULATED RECORD OF THE FINAL (50 MILE) HEAT IN LOS ANGELES RACE RUN ON APRIL 2.

POSITIONS AT 5-MILE POINTS AND FINISH

	5 Miles	10 Miles	15 Miles	20 Miles	25 Miles	30 Miles	35 Miles	40 Miles	45 Miles	50 Miles
	2:41.74	5:18.35	7:54.36	10:29.88	13:05.38	15:41.35	18:16.95	20:52.20	23:26.62	26:01.92
	Av. 111.0	Av. 113.0	Av. 114.0	Av. 114.3	Av. 114.6	Av. 114.0	Av. 115.0	Av. 115.0	Av. 115.2	Av. 115.2
Milton	2	2	1	1	1	1	1	1	1	1
Murphy	7	3	2	2	2	2	2	2	2	2
Hartz	1	1	3	3	3	3	3	3	3	3
Bordino	5	4	6	5	5	4	4	4	4	4
Sarles	3	5	7	7	7	5	5	5	5	5
Elliott	4	7	5	6	6	6	6	6	6	6
Klein	6	6	4	4	4	–	–	–	–	–

BEST AUTOMOBILE RACING EVER SEEN

Record Smashing Merely Incidental in Splendid Four Heats and a Final on L. A. Speedway, April 2.

Urgent general request, the publicity said, was the reason for the four 25 mile heats and a final heat of 50 miles on the Los Angeles 1¼ mile board speedway, April 2.

And then the general requesters did not turn up in the huge number expected. For that, various reasons. A fine day for personal motoring, following a number of days that were not so fine, perhaps was the chief excuse. Some say the prices were not "popular" enough, but they were lower than for the previous meet by a considerable percentage.

However, there was a crowd which filled two-thirds of each of the vast grandstands, and fringed the infield thickly; and it was served some of the very best automobile racing possible to imagine—real contest, full of the thrill of record breaking speed; the thrill, also, that was caused when the right rear wheel was sheared off Art Klein's car and ran ahead the length of the backstretch, at one point alongside of and touching Pietro Bordino's car; and the very decided thrill when the cars of Klein, Elliott and Bordino, silhouetted against the setting sun, did a most remarkable series of circles, figure-eights and other irresponsible geometrical stunts at the head of the homestretch, when the halfway point in the very fast 50 miles event had been reached. All without anybody getting hurt.

The general spectacle seems in retrospect even more worthy as news than the fact that the speed smashed record.

Bordino (Fiat) won the first 25 mile heat at an average of 115 miles per hour. That was record. Milton (Durant), who won the second 25 mile heat, averaged 115.2 miles an hour to 20 miles, and to the finish—record; and that was his average, also, to 45 miles, and to the end, in the final heat of 50 miles.

The fastest previous average for the distance was Milton's own 110.7, on the same track, March 5 last. At Cotati, August 14, 1921, Hearne (Duesenberg) did 150 miles at 110.65. At San Carlos, December 11, 1921, Murphy (Duesenberg), did 250 at 109.58.

—

The starters, their mechanicians and machines, were:

Hearne—Comer......Disteel-Duesenberg
Milton—Steele............Durant special
Bordino—Bruno.............Fiat special
Thomas—Nielsen.....Duesenberg special
Sarles—Ansterberg...Duesenberg special
Murphy—Olson......Duesenberg special
Elliott—McKee............Leach special
Hartz-Fengler........Duesenberg special
Wanderlich—Cariens..Duesenberg special
Klein—Roux(*)........Frontenac special

Roux was with Klein only in the first heat, when the car dropped a wheel. Klein did not start in second heat, and Wilson rode with him in the third, fourth and final heats.

Accompanying tables show relative positions at each 5 miles in the four 25 mile heats and the final 50 mile struggle; also the time and average speed at each 5 mile point. The when and why of what happened is given in some detail here:

First 25 mile heat.—Ten started, 6 finished.

Milton was in first position at each 5 mile point, but—Pietro Bordino was much in evidence and, amid great excitement, landed first at the finish. Bordino was in fifth position at 5 miles, fourth at 10 and 15 miles, second at 20 miles. He had to do a lot of riding-around in his spurts. The crowd was for him, strong.

Murphy was in second position at 5, 10 and 15 miles, third at 20, third at the end. At 5 laps, nine of the ten drivers were still in the same lap, though fairly scattered.

Elliott held third place at 5, 10 and 15 miles, then was fourth and so finished.

Hearne worked up from ninth, at

TABULATION OF PRELIMINARY HEATS IN LOS ANGELES RACE.

POSITIONS IN FIRST 25 MILE HEAT.

	5 Miles	10 Miles	15 Miles	20 Miles	25 Miles
	2:39.66	5:16.38	7:51.91	10:27.95	13:03.63
	Av. 112.8	Av. 113.9	Av. 114.4	Av. 114.8	Av. 115.0
Bordino	5	4	4	2	1
Milton	1	1	1	1	2
Murphy	2	2	2	3	3
Elliott	3	3	3	4	4
Hearne	9	9	6	5	5
Wanderlich	7	8	7	6	6
Sarles	4	5	5	–	–
Hartz	6	6	8	–	–
Thomas	8	7	–	–	–
Klein	Dropped wheel in fourth lap.				

POSITIONS IN SECOND 25 MILE HEAT.

	5 Miles	10 Miles	15 Miles	20 Miles	25 Miles
	2:38.85	5:14.40	7:49.68	10:24.90	13:01.47
	Av. 113.3	Av. 114.3	Av. 115.0	Av. 115.2	Av. 115.2
Milton	2	2	2	2	1
Murphy	5	3	1	1	2
Elliott	1	1	3	3	3
Hartz	4	4	4	4	4
Sarles	3	5	5	5	5
Thomas	6	6	6	6	6
Wanderlich	7	7	7	7	7
Hearne	8	8	8	8	–
Klein	Qualified but did not start.				

POSITIONS IN THIRD 25 MILE HEAT.

	5 Miles	10 Miles	15 Miles	20 Miles	25 Miles
	2:42.28	5:19.00	7:55.50	10:32.55	13:07.95
	Av. 111.0	Av. 112.9	Av. 113.7	Av. 113.9	Av. 114.3
Murphy	4	2	2	1	1
Hartz	3	4	3	2	2
Sarles	2	3	4	3	3
Elliott	1	1	1	4	4
Klein	5	5	5	5	5
Wanderlich	7	7	6	6	–
Thomas	6	6	–	–	–
Hearne	8	–	–	–	–

POSITIONS IN FOURTH 25 MILE HEAT.

	5 Miles	10 Miles	15 Miles	20 Miles	25 Miles
	2:39.54	5:18.15	7:54.14	10:29.52	13:05.90
	Av. 113.0	Av. 113.2	Av. 113.9	Av. 114.5	Av. 114.6
Elliott	1	1	1	1	1
Sarles	2	2	2	2	2
Klein	4	3	3	3	3
Hartz	3	4	4	4	4
Hearne	6	5	5	5	5
Wanderlich	5	–	–	–	–
Thomas	Qualified but did not start. Motor trouble.				

TOMMY MILTON.

JIMMY MURPHY.

HARRY HARTZ.

PIETRO BORDINO.

ROSCOE SARLES.

5 and 10 miles, to sixth at 15, and was fifth at 20 and to the end.

Wanderlich held seventh place at 5 miles, eighth at 10, seventh at 15, sixth at 20 and at the end.

Sarles, fourth at 5 miles, fifth at 10 and 15, then went to pit to stay, in his 15th lap, 2 laps behind Milton, leader.

Hartz, in sixth place at 5 and 10 miles, went to pit in his ninth lap, with Milton a lap ahead, and restarted with Milton 9 laps ahead. He was eighth at 15 miles, then out.

Thomas, eighth at 5 miles, seventh at 10, went to pit in his 11th lap, two laps behind Milton, and staid.

Klein dropped his rear right wheel, entering the backstretch in the fourth lap. He did not lose control, but the wheel rolled the length of the stretch, at one point touching Bordino's machine.

—

Second 25 mile heat.—Eight started, 7 finished.

Milton started in the third column-o'-twos but in the first lap moved to third position, and in the next to second, and held that at 5, 10, 15 and 20 miles and finished first.

Murphy, who started in the fourth line, was fifth at 5 miles. In the seventh lap he moved up to third, was third at 10 miles and was close to Elliott and ilton in the eighth, with Hartz 3 lengths behind him. All were still in the same lap, but scattered somewhat. Entering the 10th lap Milton took the lead on the turn. In the next lap Murphy took second position from Elliott, and in the next passed even Milton. He was first at 15 and 20 miles, with Milton really trying to pass; and Milton did pass in the 17th lap, on the homestretch, with Elliott third. Next lap, Murphy was 3 lengths behind Milton, who finished one-third the homestretch ahead of him. Murphy, it is said, had some engine trouble.

Elliott led at 5 and 10 miles and then was third throughout. Hartz held fourth position through the entire 25 miles, while Sarles was third at 5 miles and fifth after that. Thomas was sixth throughout, Wanderlich seventh all the way.

Hearne was eighth for 22½ miles, when he went to pit and staid put.

Klein was qualified to start but for the little matter of a rear axle. He was waiting for one to be brought from the city.

—

Third 25 mile heat.—Eight started, 5 finished.

In the preliminary lap they were paired thus: Elliott, at pole, alongside Sarles; Thomas and Wanderlich; Hartz and Hearne; Murphy and Klein. They got off with Elliott leading, followed by Sarles, Hartz, Murphy.

Murphy, fourth at 5 miles, moved to second at 10, was there at 15, took the lead in the 14th lap, at 20 miles and 25.

Hartz was third at 5 miles, fourth at 10, third at 15. When Murphy took the lead from Elliott in the backstretch in the 18th mile, Hartz moved to second and so finished.

Sarles was second at 5 miles, third at 10, fourth at 15, third at 20, and at the end, where he, Hartz and Murphy were bunched, a quarter of a lap ahead of Elliott.

Elliott led at 5, 10 and 15 miles, then went through as fourth.

Klein was fifth throughout. Some said his axle may not have been in true. Anyway, his tires dropped rubber.

Wanderlich was seventh at 5 and 10 miles, sixth at 15 and 20 and then immediately went to pit and remained.

Thomas was sixth at 5 and 10 miles but withdrew in the 12th.

Hearne tail-ended at 5 miles and dropped out in the 9th.

—

Fourth 25 mile heat.—Six started, 5 finished.

Elliott, Hartz, Sarles, ran in that order at the beginning. Elliott led at 5, 10, 15 and 20 miles and landed first at last, several lengths ahead of Sarles. Sarles was second throughout.

Klein was fourth at 5 miles. He took third place from Hartz in the seventh lap and held that place—but had to fight for it. In the 14th lap, with Elliott and Sarles close together ahead, he was nearly half a lap behind and

FRANK ELLIOTT.

ART. KLEIN.

JERRY WANDERLICH.

EDDIE HEARNE.

JOE THOMAS.

Hartz tried hard to get him. In the 17th lap the two were doing the neck-and-neck thing, much to the crowd's liking. Their finish was a fine race in itself, Klein beating Hartz half a length.

Hartz was third at 5 miles, fourth thereafter—but he made Klein, cheerful man of many troubles, puff some.

Hearne was sixth at 5 miles, about a lap behind the others. His motor clattered. He finished fifth and last.

Wanderlich, in fifth place at 5 miles, finished the fifth lap and called it a day.

—

Final heat, 50 miles—Seven started, 6 finished. The lineup, by twos, was: Elliott (pole) and Hartz, Milton and Klein, Murphy and Sarles; Bordino, all alone, at the rear. The usual chorus of ripping snorts as the procession got under way. Around one lap—they looked all right to "Wag" as they came down the homestretch with the setting sun behind them—so he gave 'em the flag, and—

Hartz, up in front but outside, swung ahead and to the pole. Klein took second position, with Milton third, the others bunched. Thus the first lap. Second lap, the same order in the lead, and Bordino moving up—and stirring the public pulse. Third lap—Hartz, Milton, Klein, Sarles, Elliott, Bordino, Murphy.

Fourth lap (5 miles)—Sarles moved up to third, Klein dropping back. At the lap's end the order was Hartz, Milton, Sarles, Elliott, Bordino, Klein, Murphy.

Fifth lap—Entering the first turn Milton moved up to pass the time o' day with Hartz. Speeding up a bit now—they had been gliding along at about 111 per. Into the backstretch Milton took the lead. There, Bordino moved from fifth to fourth. He had to sweep high to do it. He kept on sweeping high, and—

Sixth lap—Bordino, at its end, at the tape, moved to third, displacing Sarles. Seventh lap, Bordino still third, Sarles fourth, Murphy fifth—and Murphy's Dusie getting its Dutch up, though after the fifth lap its tires were practically treadless. In the backstretch Murphy stepped into fourth, and—

Eighth lap—Right at the tape, Murphy was third, displacing Bordino closely. S-o-m-e excitement.

At the lap end (10 miles), they were going at 113 per, in this order: Hartz, Milton, Murphy, Bordino, Sarles, Klein, Elliott. On the second turn Murphy moved up another notch. In the ninth lap, Milton, Murphy, Hartz, was the lead order. So it was in the tenth lap. A dandy race. Eleventh lap—Milton, Murphy, Hartz, Klein, Bordino, Elliott, Sarles; fairly close together.

At 15 miles it was Milton, Murphy, Hartz, Klein, Elliott, Bordino, Sarles. So it went.

Sixteenth lap — Sarles losing — 20 lengths to the bad at this point, 20 miles. Pace 114.3 now. The order: Milton, Murphy, Hartz, Klein, Bordino, Elliott, Sarles. Seventeenth lap—Sarles went to pit—briefly. The race went on hotly, with little change.

Twentieth lap—Going a little faster—114.6—at this, the 25 mile point. The order same as at 20 miles. Twenty-second lap—Almost in Indian file.

Then, in the backstretch in the next lap, Elliott moved up a bit, the procession swung into the second turn, out of sight of the press stand on account of the infield railbirds, and as the three leaders came down the homestretch, three others, swinging into the stretch, staged something the like of which probably never was seen on any track before. The sun was low. Its rays came out of the West, straight down the stretch, giving it a rosy burnish. Against this blinding light the main grandstand crowd saw, in silhouette, the cars of Klein, Elliott and Bordino describe intricate circles—always on four wheels. They sashayed up and down and around, paused, and started to do it all over again. Finally the queer performance ended, the three cars were at the track base just at the beginning of the stretch, one car—Klein's—emitted a cloud of white smoke, and presently Bordino drove slowly down the stretch to his pit, he and his aide each waving an "all's well" hand aloft. Gosh, but that crowd was glad! Bordino's front wheels toed in. Soon Elliott also drove to his pit. Klein's machine was the badly twisted one. Klein having a tire blow out caused it all, they say.

Twenty-fourth lap (30 miles)—Milton, Murphy and Hartz still led. Hartz was losing, and at 26 laps was almost the stretch length behind. Next lap, the same.

Then Bordino, with his front wheels toeing in, restarted! Crowd went wild. Was it wise? But it was gritty!

Twenty-eighth lap—Here, at 35 miles, the order was Milton, Murphy, Hartz, Bordino, Sarles, Elliott. Average, 115 m. p. h. In his next lap, 29th, Bordino again went to pit for a front right tire but held his position. Nothing special for awhile but speed.

Thirty-second lap—Forty miles. Average still 115. Order same as at 35 miles. Here Elliott, still in his 23d lap, restarted—more cheers. Ten more miles for the leaders to go.

Thirty-sixth lap, 45 miles, average 115.2 per, and the order unchanged. Milton's machine, or his driving, or both, went on faultlessly. At 37 laps he was half a lap ahead of Murphy, who led Hartz half a lap; and it was so till they finished the 40 laps, when Bordino was at 36, Sarles at 33, Elliott at 30. All went the full 40 laps except Elliott, who was flagged in his 38th.

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Bordino is said to have decided, on account of alleged unfairness toward him by other drivers in this race, not to take part in tomorrow's race at San Carlos, or at Cotati, May 7.

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Four 25 miles heats and a final 50, particularly when contested as this series was, "beat the tar out of longer races." Comment to that effect was frequent. Minimum of pit stops and grind, and maximum of racing.

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When Klein's Frontenac dropped its right rear wheel, due to a broken axle, a motorcycle policeman escorted a Reo speed wagon to Los Angeles, where an axle was removed from Peter De Paolo's Frontenac. The trip to town and back was done in 42 minutes.

—

The poppies in front of grandstand A went to sleep at 4:30. The 50 mile event did not start till 5:05. The movie stars, who populated the boxes thickly, kept right on shining. Charlie Chaplin was one. Wallie Reid, entrant for the Indianapolis 500 mile race, was another. Tom Mix was a timer.

—

Thomas broke a valve in the third heat.

—

The day after the race, the prizes were paid, due to the multiple scoring. For his part in this, P. C. Pommer is said to be rated a phenom.

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In the 25 miles heat Bordino won, averaging 115 miles per hour, he is said to have done the last lap at 118.2.

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Milton wired congratulations to A. A. MacCallum, San Francisco manager for SKF Industries, of New York, giving credit to Hess-Bright bearings, purely an American product, for the great speed he made.

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Through what Milton claims was false advertising, beyond his control, presumably in connection with his entry for the Indianapolis race, Fresno got an impression he intended to skip its race. Apparently as a result, the A. A. A. has suspended Milton, so that he may not be able to compete at San Carlos tomorrow.

COLUSA COUNTY IS HEARD FROM

Vote for $795,000 Highway Bond Issue Puts Northern California Campaign Total at $17,000,000.

The good roads bureau of California State Automobile Association actively promoted the successful campaign in Colusa County, resulting in voting a good roads bond issue of $795,000 on March 28. The vote was 4 to 1. Thus far the association's good roads bureau has fostered and actively managed county road campaigns resulting in the voting of $17,000,000 for improved highways in Northern California counties, in addition to its effective work for the three state bond issues. Many moving pictures showing the results of improved highways were used by Manager C. C. Cottrell, of the association's bureau, in the Colusa campaign. Colusa County now is traversed by state highways north and south, and east and west. The bond issue just voted will provide it with a system of connecting roads, opening up a vast agricultural district.

New Kingston Coast Head.

Byrne, Kingston & Co., Kokomo, Ind., manufacturers of Kingston carburetors, have announced the appointment of George E. Anderson as Pacific Coast branch manager at San Francisco, succeeding Fred L. Houston. The branch has been moved to 32 Van Ness Ave.

Motorists' black plague—carbon.

A SNOW TRIP IN AN H.C.S. TO ARROWHEAD LAKE.

What was Little Bear Lake now is Arrowhead Lake. It is in the high San Bernardino Mountains, east of Los Angeles. During the heavy snow period which closed this last winter a party in an H.C.S. car proved that enjoyment of the beautiful mountain playground need not be limited to the warm months, especially when the present road is supplemented by a new one, up from Cajon Pass, over a grade never over 8 per cent. That and many other improvements are said to be nearing completion. The Arrowhead Lake Co. has three camps of men at work. The lake has been cleaned and the dam raised, to increase its size. All buildings are to be replaced with new, typically mountain structures. The land is to be subdivided and the owners will enjoy the fishing and hunting privileges of the preserve. One picture shows the H.C.S. scouting party on their way through snow which averaged 2 feet deep. The other shows the club house at the lake. The H.C.S. had no trouble even with the present road. It went up over the switchbacks of Waterman's Canyon and then on up, and down, and around—four days of snow bucking, with all four wheels equipped with chains—but with nothing encountered that could be called a hardship. Every man in the car was glad he had on all the clothes he had on—it was real winter up there—but all enjoyed the bite of Jack Frost, the glisten of the snow crystals, the rare charm of the region.

De Vaux Heads Star Car on Coast.

Formation of Star Motor Co. of California, with $2,000,000 capitalization, headed by Norman De Vaux, former president of Chevrolet Motor Co. of California, later president of Durant Motor Co. of California, has been announced from Oakland by R. C. Durant, head of Durant Motor Co. of California.

The new company will distribute the Star car, a low priced car to be manufactured by W. C. Durant and sold through Star Motor Car Co. The car was shown for the first time in Washington, D. C., recently. Mr. De Vaux has been right hand man to R. C. Durant in both the Chevrolet and Durant organizations, and Mr. Durant will be vice president in Star Motor Co. of California. Star cars will be assembled in Oakland and the first cars will be in dealers' hands in about six weeks.

Three New Agencies in Salt Lake.

Two new lines which arranged for representation in Salt Lake City recently are the Durant car and the Jewett, and the first models placed on display by the new distributors are attracting considerable attention.

Intermountain Motor Car Co., 553 South State St., has the Durant for Utah.

Madsen-Farrar Motor Co., 55 West 4th St. South, well known as Paige car distributor, has added the Jewett, also built by the Paige organization.

Another change is in a prominent authorized Ford agency, which also is exclusive distributor for the Lincoln car. This concern, Goodwin-Dickson Auto Co., 601 South State St., has been bought by Covey-Ballard Motor Co., a new company headed by Stewart M. Covey, president of Covey Investment Co., and Melvin R. Ballard, his junior partner. Mr. Covey states that his agency has placed one of the largest single Ford dealer contracts received by the Detroit factory this year.

Burd Piston Ring Wholesaler.

Burd Piston Ring Co. of California has appointed Barney Bristow wholesale distributor for California, Nevada and Arizona, with headquarters at 468 McAllister St., San Francisco, and branches at 1900 Telegraph Ave., Oakland, and 1003 South Figueroa St., Los Angeles. Mr. Bristow formerly was Burd ring and Buda engine parts dealer in Oakland. The company carries in stock appfoximately 400,000 rings. Mr. Bristow, under the company name of Barney Bristow Co., selling wholesale only, now is appointing exclusive dealers up and down the Coast.

CARELESSNESS IS INCOMPREHENSIBLE

Extraordinary Rashness of Drivers of Motor Vehicles Related by a Southern Pacific Man.

Nevada's public service commission recently issued an order requiring the drivers of motor stages and trucks engaged in the transportation of passengers, explosives and inflammable liquids to stop before crossing the tracks of any steam or electric interurban railroad and look in each direction for approaching trains.

The order, which does not apply to the crossing of tracks of electric and other street railroads within municipalities, is similar to the one recently issued by California's commission, but is broader in scope, as it includes trucks transporting explosives and inflammable liquids.

The degree of carelessness and recklessness on the part of automobile drivers is almost incomprehensible, according to R. J. Clancy, who is in charge of the safety department of the Southern Pacific Co. During the last three years and nine months ending September 30, grade crossing accidents on that railway system involved the death of 177, injury to 828 and the damage or destruction of 2495 automobiles. The number of instances is surprising in which automobiles ran on tracks in front of train, usually the result of racing with the train; ran into side of train instead of train into them, mainly the result of trying to beat train to the crossing; ran through and broke down crossing gates lowered to protect them from approaching train, and ran down and injured crossing flagman warning them of an approaching train.

An Urge from Colonel Fletcher.

Advising Los Angeles, San Diego and Phoenix to pull together, Col. Ed. F. Fletcher, foremost good roads exponent of San Diego County, urges more speed in paving state highways connecting them.

Colonel Fletcher said to a Motor West man many misleading reports are extant as to the mileage of the two most talked of routes. Instead of the Phoenix-to-Blythe road, leading to Los Angeles by way of Mecca and the Salton Sea, being 150 miles shorter, Colonel Fletcher said he had the word of Thomas Maddock, state engineer of Arizona, that there is not more than 85 miles difference in the lengths of the two routes.

"The route that takes in Yuma, El Centro and San Diego," said Colonel Fletcher, "leads through promising valleys, all projected for if not under irrigation, while the other leads through more than 200 miles of barren desert.

"California Highway Commission already has designated the San Diego-Yuma road as the first one to receive Federal aid. That gives the motorist opportunity to drive through the most thickly populated, most fertile, and most pleasing country from a scenic standpoint."

Coast Durant Ready by Summer.

Within less than three months the new plant of Durant Motor Co. of California, with headquarters in Oakland, will be in production, turning out sufficient Durant cars to supply all the Coast states, the Orient, and other trans-Pacific markets as well, according to R. C. Durant, president. Meanwhile the Long Island City plant is shipping cars to the Coast by rail and via Panama Canal. A shipload of 40 completely assembled Durants recently was sent by water in the freighter Liberator, with such success that it probably will be repeated. Twenty cars were unloaded at San Pedro for Los Angeles and Southern California, and 20 at Oakland, being lifted out of the ship's forward hold by a boom and special platform.

THE OUTLOOK.

Business is better in Los Angeles today than any part of the United States, with possibly the exception of Northeastern Pennsylvania and some parts of Florida. I think one of the reasons is diversified industries, but mainly the reason is confidence. Business men of Los Angeles have confidence in each other. They are willing to grant each other credit, and because of this confidence you are today operating on a basis 90 per cent of normal. I look for a gradual return to normal conditions throughout the country within two years, with a possible reaction that will soon be overcome, during July and August of this year.—Merle Thorpe, editor Nation's Business, on April 4.

Automatic Brakes on S. P. Trucks.

The Southern Pacific Co. is equipping its 4 wheel baggage trucks with automatic wheel brakes, to prevent the trucks rolling onto tracks when left on inclined platforms. The wheels of the new trucks become locked when a downward pressure is exerted on the truck tongue.

Lem Loosehead says: Lotta people see things that ain't so.

Acquire Bennett, Business Doctor.

Coast automotive equipment circles have been given a surprise by the appointment of L. H. Bennett to the position of director of merchandising for all branches of Chanslor & Lyon Co. Mr. Bennett for the past year has been employed by the San Francisco, Los Angeles and San Diego jobbers in the development of their trade promotion campaign. He has been most widely known to the trade throughout California as the "business doctor" of California Automobile Trade Association. In this capacity he analyzed more than 400 businesses, installed accounting systems, designed buildings for dealers and acted in a general advisory capacity to the association and to all dealers in the state.

The "Ask 'Em to Buy" campaign of the Automotive Equipment Association, with the trade promotion film, was directed by Mr. Bennett and he has spoken in almost every city and town in California. This experience has given him a broad insight into dealer affairs, and a wide acquaintance, which excellently fits him to direct the merchandising program of the Chanslor & Lyon Co.

Mr. Bennett for many years was a Ford dealer and also has been associated with Studebaker and General Motors Corp.

The Chanslor & Lyon Co. realized the need of closer contact with the dealer and wanted a real understanding of the dealer's needs and problems. Much of Mr. Bennett's time will be devoted to this work. He will continue to study dealer demand and new outlets for automotive equipment in the field, helping dealers when requested, as in the past.

Denver Show Had 72 Cars.

Thirty-six Colorado passenger car distributors placed 72 cars on display, and there were 46 accessory exhibits, in the recent Denver automobile show, March 22-25, lasting 3 days and 4 evenings and held in the Municipal Auditorium. The show was successful both in sales and attendance, and especially notable was the presence of more than 400 dealers, who placed a volume of orders that strikingly proved the revival of business in the Rocky Mountain territory.

Henry Dawson, in charge of last year's event, was manager again this year, assisted by a committee of seven selected from the membership of the Denver Automobile Trade Association.

Eight different weight laws in ten counties traversed by trucks between Los Angeles and San Francisco.

PHOENIX WILL BE ROAD MEN'S HOST

Arizona Capital To Be Scene of Two National Conventions and Big Show During Week of April 24-29.

The Government has officially recognized the importance of the annual convention of the United States Good Roads Association, the Bankhead National Highway Association and the United States Good Roads Show to be held in Phoenix, Ariz., April 24-29, by sending one of the largest and best good roads exhibits that has ever left Washington.

Director General J. A. Rountree, of the United States Good Roads Association, announces that among prominent visitors to the convention will be Senator Charles E. Townsend, of Townsend bill fame; Henry C. Wallace, Secretary of Agriculture; L. D. Blauvelt, state highway engineer of Colorado; Governor E. Lee Trinkle, of Virginia; ex-Governor Larrazolo, of New Mexico; Governor Thomas E. Campbell, of Arizona; John A. Crook, of Colorado, who built the Grand Canyon suspension bridge; G. A. Martin, president of El Paso Automobile Club; Mrs. B. Frank Mebeme, an eloquent good roads advocate of North Carolina; and representatives from at least 28 states.

In all, over 200 delegates are expected to be present during the convention, and the Arizona Good Roads Association is planning tours from the principal cities of the state to Phoenix during the week. Entertainment features will include sightseeing trips to Salt River Valley, Globe and Miami.

Midwest Engine Co. Financing.

March 1, Motor West said reorganization plans of Midwest Engine Co., Indianapolis, were moving well, to provide $1,000,000 new working capital so as to meet the growing demand for its products, insure its permanence and make its ratio of quick assets to quick liabilities practically 10 to 1. April 13 comes a wire that the re-financing was finished so early that for purpose of clearing titles, etc., the reorganization committee took the final step that day and receivers were appointed, with Lon R. Smith as sales manager for O. E. Stevens and Frederick Van Nuys, receivers. Business will be carried on as usual and production and sales activities will continue without interruption.

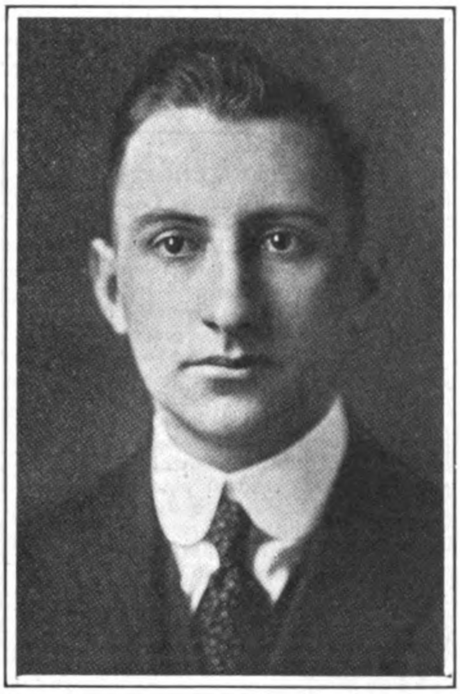
Ahlberg Branch in Fresno.

R. D. Angelica, Western manager of Ahlberg Bearing Co., reports that an additional branch was opened March 15, under his supervision, at 2124 Tuolumne Street, Fresno, Calif. The new branch will operate under the management of R. J. Duddy.

Ahlberg Bearing Co. already had branches in Los Angeles, San Francisco, Oakland, Fresno, Portland and Seattle, and it is the intention of the parent company to open others soon in Tacoma, Spokane, Salt Lake City and San Diego.

Buyers Flock to See More.

Davis Radio Signal Co., Hollywood, Calif., reports an excellent demand for its See More trouble lamp, and that dealerships are being taken up rapidly in every section of the Pacific Coast. The many uses to which this lamp may be put, in addition to its being an aid in locating and remedying troubles at night, make it a desirable addition to the equipment of every car. As a camping adjunct it is invaluable, as its 10 feet of cord permits of its being used as a camp light, for reading, playing games, etc. The See More may also be used as an emergency head or tail light.



W. L. SPAIN.

Mr. Spain, native of Winnipeg, has been made manager of the branch there to serve Western Canada for Bearings Service Co., Detroit, which acts as service department for Timken, Hyatt and New Departure bearings.

Spreckels "Savage" Ad. Campaign.

Watch for bill posters, magazine and other advertising of the Spreckels "Savage" Tire Co., San Diego. Its campaign is to cover the entire West. A prominent feature will be a picture of an Indian, "Little Heap."

Mexico City's Show.

The coming week, April 16-24, will witness the staging of Mexico City's annual automobile show, in the beautiful new $15,000,000 National Theater, which is still unfinished. Upwards of 30,000 square feet of the huge building's floor space will be utilized for the show, in which 44 dealers, mostly Americans, will exhibit. Among the 30 different makes of cars which will be shown are: Buick, Reo, Gardner, Paige, Ford, Roamer, Studebaker, Hudson, Pierce-Arrow, Renault, Mercedes, Columbia, Fiat, Franklin, Chevrolet, Packard, Chalmers, Cadillac, Oldsmobile and Moon, besides a dozen or more makes of established American motor trucks. The accessories display will also be quite complete.

Manager Fred H. Caley, secretary of Cleveland Automobile Club, has spent $17,000 in decorations and lighting effects, and the affair has the sanction of the elite of Mexico's capital. One of the features will be an immense wheel, 25 feet in diameter, between the spokes of which will be the names of various makes of automobiles. Tickets will be sold at 50 centavos each, bearing corresponding names. The wheel will then be spun, and the person having the lucky ticket gets the pot. The show management gets none of the proceeds, 25 per cent of which will go to various local charities.

Trade Heads Flock to Coast

Every year the Pacific Coast is being included in the traveling radius of a rapidly growing number of automotive trade heads, who voyage afar from their factories to investigate business conditions and possibilities at first hand. The year 1920 saw a great rise in the influx of them into the Coast territory, but already that high mark has been surpassed by the present year. Every week, several higher-up factory men turn up in the five or six principal Coast centers.

The list of visitors within the past four weeks includes such men as W. L. Velie, assistant secretary of Velie Motors Corp., Moline, Ill.; Harry M. Jewett, president of Paige-Detroit Motor Car Co., Detroit; George T. Bryant, director of sales of Robt. H. Hassler, Inc., Indianapolis; W. E. Devlin, sales manager of Tioga Tractor Co., Baltimore; J. P. Clifford, district representative of Erie Tire & Rubber Co., Sandusky, O.; Charles F. Bockus, production manager of Studebaker Corp., South Bend, Ind.; George H. Hannum, president and general manager, and C. J. Nephler, general sales manager, of Oakland Motor Car Co., Pontiac, Mich.

IMPETUS IS GIVEN TO TREE PLANTING

Co-operation Putting New Energy Into Movement to Beautify Roadsides in All Parts of California.

Ambitious plans for roadside tree planting and beautification are being perfected through co-operation of California Highway Commission, county authorities, the Board of Forestry, and the state university. Since the movement became active, 62½ miles of state highway, distributed in six counties, has been planted with approximately 8000 trees. The maintenance cost runs from $50 per mile per year in the valley sections to over $300 per mile per year on desert sections. However, maintenance cost decreases with the age of the trees and in a few years becomes little or nothing, except occasional trimming. The trees have a value both in protection to the highways and beautification of the landscape, far beyond the probable cost of propagation.

Recently an inspection trip to San Diego County was made by Solon Williams, member of the Board of Forestry, and M. B. Pratt, state forester, and a plan arranged with the county for the progressive planting of the state highway from the Orange County line south to the city of San Diego, and from there to Pine Valley on the San Diego-El Centro lateral, a total distance of about 80 miles. The San Diego County supervisors have appropriated $1000 to start the work. The species of trees recommended vary according to soil and climatic conditions and include European sycamores, Monterey cypress, desert gum, Australian beech, blackwood acacia, flowering eucalyptus and live oaks.

Fresno County has a tree planting plan to cost about $2500.

Yolo County planting of 2920 trees on state highways has been completed and the total cost was found to be 42 cents per tree, nursery stock being furnished free by the Forestry Board at its nursery.

Permission has been granted by California Highway Commission to the Marin County Federation of Women's Clubs to plant 170 tanbark oak trees along highways. The trees are to be 100 feet apart, in alternate arrangement on both sides of the highway.

Permission has also been granted to the farm center of Aberdeen Fish Springs, in Inyo County, to plant the highway at Aberdeen with Lombardy poplar trees in opposite arrangement.

The trees in each instance will be planted without expense to the state, but will be maintained by the highway commission.

The Foresters of America, with headquarters at 890 Mission St., San Francisco, have been granted a permit to plant European sycamores along two miles of state highway in San Mateo.

Says Cities Treated Unfairly.

City Engineer Griffin, chairman of the streets opening and widening committee of the Greater Los Angeles Traffic Commission, states that although Los Angeles motor vehicle owners pay 76 per cent of the total amount of registration fees paid from the county to the state, the county receives all of the 50 per cent refund from the state. The state's refund to the county approximates $1,000,000 a year, of which amount not one cent is now used for the improvement of Los Angeles city streets. Mr. Griffin says the present law is unfair to all of the large cities, and urges its amendment. According to present calculations, this law, if changed, would give Los Angeles approximately $600,000 of the amount returned by the state, and Los Angeles County would receive about $400,000.

CHEERING NEWS

In New York, April 4, Charles M. Schwab, chairman, and Eugene Grace, president of Bethlehem Steel Co., contributed cheering views at the stockholders' meeting.

"Regarding present business and operations," Mr. Grace said, "March was the best month for some time, with indications for its continuance during April, when operations will be about 60 per cent of capacity. Prices are firming up somewhat above recent low levels and the purchasing public is beginning to realize that steel makers are entitled to somewhat higher prices."

"There is absolutely no basis for reports put out in some quarters that the directors will reduce or pass the dividend on either the class A or B stocks," Mr. Schwab stated.

No San Diego Show.

No San Diego automobile show this year, is the word from H. S. Penfold, who managed last year's event, and Frank Bowden, secretary of the dealers' association. They say show enthusiasm is lacking, owing to uncertainty of markets and the rapid changes being made in advance models. Mr. Bowden's personal opinion is that a show "is just exactly what San Diego needs most this spring"; but the necessary co-operation is not there, is his sad finding.

Commission's Route Selection Stands.

An important decision was made recently by Superior Court Judge J. Perry Wood, of Los Angeles County, in favor of the California Highway Commission. For the first time in the history of the commission an attempt was made through the medium of a court to set aside the determination of the commission in the selection of a route for a state highway.

The suit was brought by Scott Alexander, of Long Beach, to compel the commission to build the particular portion of the proposed Oxnard-San Juan Capistrano state highway, lying between Long Beach and Seal Beach, immediately along the shore, between these points instead of slightly inland from the shore, the latter location having been decided by the commission to be the more economical and practical one. By choosing the inland route the commission obviated the construction of two expensive bascule bridges over inlets of the sea, and avoided serious right-of-way difficulties.

Judge Wood held that the choosing of the route rested entirely within the discretion of the commission, that the court could not interfere unless bad faith was shown, and that the plaintiff had failed to establish this.

First Leach Models in Oakland.

Three styles of the Leach 999, a 7 passenger, a 5 passenger chummy and a 3 passenger roadster, recently were driven from the Leach-Biltwell Motor Co. plant in Los Angeles to Oakland, for display by Ulrey-Noteware Co., distributor for Alameda, Contra Costa and San Joaquin Counties. Mr. Ulrey, who headed the driving party, formerly had his company in King City, Calif., where for many years he was president of the First National Bank. In Oakland his company also has the Studebaker for the northern part of California. He recently obtained the Leach franchise from Golden State Motors Corp., which has state sales rights, with branches being opened in principal cities, and which will allot another line also, later, to the Ulrey Co.

Mr. Ulrey is a large stockholder in the Leach-Biltwell Co. Several orders his company has taken will be filled direct from the factory.

Schmunk Resting but Looking.

R. J. Schmunk, formerly general sales manager of Peerless Motor Car Co., Cleveland, for many years, and now on the Coast for the first real vacation he has had in 15 years, is busily studying the beauty spots of Southern California, and doing some investigating which may lead to his finally adopting Los Angeles as his home.

SPOKANE SEEN AS IMPORTANT POINT

Tribute Paid to Chief Inland Empire City as Feeder to Parts of Four Northwestern States.

Development of Spokane as a Northwestern automobile center was predicted by H. W. Booth, sales representative of the Hudson-Essex factories, speaking at a meeting of Inland dealers at the Davenport Hotel. The meeting was called by John Doran, territorial distributor.

"The territory around Spokane has maintained a high buying standard," Mr. Booth said. "Every indication is that Spokane will become a great automobile center. Its natural location makes it fit for a branch factory house, and a natural feeder for portions of the four Northwestern states."

Motor vehicle license fees collected at Spokane to April 3 this year totaled $256,363, and for 7000 cars licensed last year no 1922 licenses had yet been sought up to that date.

The Hayfield wheel, an automobile wheel with the pneumatic tube around the hub instead of the rim, will be distributed throughout the Northwest territory by the Northwest Hayfield Wheel Co., which has been organized in Spokane with a capital of $10,000 by F. E. Pope of Elmendorf & Pope, J. C. Pritz, F. T. McCroskey, George C. Howe and L. R. Hamblen. Mr. Howe is president.

Spokane Chandler Co. has changed its name to Chandler-Cleveland Cars Co., according to R. K. McIntosh, president of the new company. Other officers of the company are G. T. Brown, secretary, and W. E. Mitchell, director. The company has renewed the lease on its present quarters at W920 Second Ave. and is making extensive alterations.

Four automobiles were sold in one day of the last week in March by C. H. Preston, a salesman for Finlay-Studebaker Co., according to E. C. Finlay, president. The sales aggregated $11,280.

Hunting and Fishing Licenses.

To give increased service to its members, California State Automobile Association will have on sale this year hunting and fishing licenses, available at headquarters in San Francisco and the 11 branch offices and seven touring bureaus in Northern California.

The fishing season this year is one month late, opening May 1. The hunting season opens July 1. Cost of the fishing licenses is $1 to a citizen of California, $3 to a nonresident citizen and $3 to an alien. The hunting license price is $1 to a citizen; $10 to a nonresident citizen; $25 to an alien and $10 to an alien who has taken out first papers.

Spokane's Tire Plant Producing.

The Jack Tire & Rubber Co. has been producing Jack tires and inner tubes at its factory on Apple Way, east of Spokane, for several weeks. The company is owned by 1000 residents of the Inland Empire and is officered by Thomas G. Richards, president and general manager, and John B. White, secretary-treasurer. Production is being increased steadily and has reached a point where the company is prepared to sell and deliver tires to the public and to arrange for agencies.

FOOLISH FEAR.

"Two years ago," said a banker recently, "the country was filled with business optimism, while every sign pointed toward hard times. Now, in districts removed from the Southern California white spot, we hear the wail of the pessimist when all indications are toward improving conditions."

As a matter of fact, the United States is suffering from a case of arrested distribution, a trouble which is symptomatic rather than organic and which is pretty certain to yield readily to treatment. There is much of psychology in the situation.. A good many persons are worrying over the fear of an empty stomach tomorrow, even while they are filling in today.. During the famous march of Coxey's army across the country a few years ago the socialistic and radical press made much ado over the thousands of men out of work and the hard condition into which labor had fallen, yet during all that march the army didn't miss a meal.—Chapin Hall in Los Angeles Times.

After Sign Mutilators.

A reward of $50 for information leading to the arrest and conviction of sign mutilators is offered by California State Automobile Association. Each year it spends many thousands of dollars in replacing damaged signs. The Forest Service has told its rangers to co-operate. Members of the association also are urged to assist. Where arrests are made the legal department of the association will prosecute actively. Small signs announcing the reward are to be placed on the regulation C. S. A. A. road markers.

Los Angeles is said to have the sum of $12,000,000 invested in its scenic highways.

New Home for Lathan Growth

Due to expansion of business, Lathan Auto Supply Co., San Francisco, has moved to larger quarters, a new building at 1454 Pine St., constructed for its special needs, and providing 14,000 square feet of floor space. A great and growing business is being handled on Critz lubricating system, manufactured by the company, and which will take up more than a third of its present large floor space; Zenith carburetors, for which it is Pacific Coast distributor; and Steel Wing shock absorbers. It was founded in 1911 and its officers are J. E. Lathan, president; S. R. Walker, vice president; A. S. Lathan, secretary-treasurer.

Especially good business is being handled on the Critz lubricating system, a California invention covering several exclusive features—swivel head for easy and quick operation, a ball check at the nozzle to automatically check the flow of grease when operation is completed, and powerful pressure of 2000 pounds.

Enlarged Map Service.

Strip maps of the route from Los Angeles to Phoenix via Mecca and Blythe, and via Parker and Wickenburg, are being completed by California State Automobile Association, San Francisco. These will be ready for the 1922 touring season.

Strip maps also will be available with the opening of the season, covering the Victory Highway to Kansas City, to where it has been signed with C. S. A. A. yellow-and-blue road markers. The engineering department is preparing detailed county maps for Sonoma, Marin ,and San Mateo Counties. Other maps of counties not covered in detail by strip maps are to be prepared.

F. B. Naylor Retires.

F. B. Naylor, a pioneer automobile dealer of San Diego, handling the Buick for 18 years and who drove the first gasoline car, a 1 cylinder Cadillac, over the mountains between San Diego and Imperial Valley in 1900, has retired, to live quietly on his ranch at Loma Portal. Robert D. Maxwell, two years ago a partner in the Studebaker agency in Los Angeles, has bought the Buick agency, the equipment, and the handsome 2 story Naylor building at Broadway and Union St., San Diego.

Now Is Swanson Supply Co.

Swanson Supply Co., Los Angeles, is the new name of what formerly was Swanson Tire Co., doing now an exclusive wholesale business in mechanics' tools, garage supplies and automobile parts at 408 West Pico St.

WASHINGTON HITS A STRONGER PACE

Seattle Pleased by Notable Showing of Motor Vehicle License Receipts in Year's First Quarter.

Seattle is pleased. Receipts into the Washington state treasury from motor vehicle licenses during the first three months of 1922 were only $106,000 less than for the second quarter of 1921, which of course was the period when automobile touring and sales of new cars strike their real stride, following the winter slackness. This year, by recent legislation, the license year opened January 1, instead of March 1, as previously—yet up to March 1 there was collected $2,393,981, compared with $2,499,837 for the first quarter of the 1921 fiscal year—March, April, May. These figures become still more striking when last winter's unusual climatic conditions are considered.

Sales have opened up especially strong in April in Eastern Washington, now that the winter hang-over is but a memory.

Tire dealers in Seattle report business in March 20 per cent better than in the same month last year, and the average for passenger car distributors is slightly better. Motor truck sales are being helped by activity in the lumber industry, which is filling a steady demand from Japan and increasing its shipments by both water and rail.

Mitchell, Lewis & Staver Co., distributor of Gardner cars, has leased a 4 story and basement building, containing 36,000 square feet, at Eleventh Ave. and East Pike St., to handle rapidly growing business.

C. B. Cornell, manager of the Portland branch of White Co., Cleveland, has been transferred to head the Seattle establishment, according to announcement from the San Francisco headquarters of G. A. Urquhart, Pacific Coast manager for White.

To Fight Unreasonable Laws.

Fred Mott, secretary of California Motor Transport Association, which originated in Fresno, Calif., has recently opened offices at 211-215 Kerckhoff Building, Los Angeles, from which point the activities of the association will be directed.

A determined fight is planned against the passage of restrictive ordinances or other laws, tending to interfere with the reasonable and profitable operation of motor trucks, and which at the same time would be a deterrent to the state's progress.

While admitting that a part of the failure of some portions of California's highway system is due to motor trucks and stages, Mr. Mott says lax enforcement of ordinances already in existence is one of the fundamental causes. This has permitted a comparatively small percentage of operators to do damage wholly out of proportion to their numbers. He urges the strict enforcement of present ordinances, and until the proper economic solution of the present problem can be determined he hopes any additional legislation will be deferred. The California Motor Transport Association will work to that end.

Arizona Legislation.

On March 30 the Arizona house of representatives passed the senate bill regulating vehicle traffic, limiting loads to 14 tons, or 800 pounds for each tire inch, with speed for heavy trucks not to exceed 10 miles per hour. The new bill raises the speed limit for light cars to 35 miles an hour on open highways and 15 miles an hour in towns. A provision of the new law compels bicycles and horse-drawn vehicles to carry lights at night.

THE RADIO ERA.

That the predicament of a man alone in the desert, broken in spirit, bowed down by the very immensity of his loneliness, may be overcome through the instantaneous medicine of radio bringing him in touch with the throbbing heart of the world, illustrates the thought which I would convey. Thousands of people, bedridden, living in secluded regions and inaccessible places, are finding a new broadness of thought and a renewed interest in life coming to them on the air. Immortal words of great statesmen of the future, which in times past have been heard by the favored few, may now become the personal property of the outermost man of civilization. At least it is believed this is a possibility and I do not hesitate to say that it is not a dream.—Prof. R. W. Sorenson, Electrical Engineer.

In the senate a bill to tax motor truck lines brought out the assertion that the movement is in the interest of the railroads, and amendments were introduced reducing to 5 or 10 per cent the tax named in the original bill, which was 20 per cent of the gross receipts.

G. L. W. Spring Oilers in the East.

The G. L. W. Spring Oiler Co., San Diego, has closed a number of large Eastern contracts for its spring oilers and is doing the busiest business in its history.

Overhauled the car yet? Better.

Busy Spring Opening in Oakland.

March was an especially busy and profitable period for automobile dealers in Oakland. In that month Howard Automobile Co. sold 50 new Buick cars and on the last day had 26 orders still on its books; Don Lee sold 22 Cadillacs and 35 used cars of various makes; Bell & Boyd, 40 new Willys-Knights and Overlands and 45 used cars; Hamlin & Wichman, 30 new Hudsons, 20 new Essexes and 35 used cars; Hebrank, Hunter, Peacock Co., 24 Chandlers, 40 Clevelands, 20 Hupmobiles and 48 used cars; Weaver-Wells Co., 80 Studebakers and 70 used cars, and had 22 unfilled orders; H. O. Harrison Co., 75 Dodge Brothers cars retail, 25 wholesale, and 30 used cars. The month was a high sales mark for practically every dealer.

Two new car agencies are for the Stephens and the Case. Benson-Beckett Co., composed of W. J. Benson, wholesale distributor of the Stephens for Northern California, and A. J. Beckett, his former Stockton manager, have bought the business of Brasch & McCorkle, 3068 Broadway, previously handling the car for Alameda and Contra Costa Counties. Davis Motor Car Agency, 2400 Broadway, Davis car dealer for Northern California, has added the Case 6 cylinder car for the same territory.

Bell & Boyd, Willys-Knight and Overland dealers, have opened branches in Alameda and Berkeley, to take care of increasing business.

Tiolene Lubricants Distribution.

Leonard Freer, formerly Pacific Coast manager of Tidewater Oil Sales Corp., who now is in charge of the Western district of the Pure Oil Co., advises Motor West that Tiolene motor oils and greases are now going into every state in the country, and that distribution of these lubricants is being nationalized and internationalized. They are being marketed on the Coast from San Francisco and Los Angeles, with headquarters in the Alexander Building, San Francisco.

The Pacific Coast territory includes everything west of Denver—a field in which 1,250,000 automobiles are registered. Mr. Freer, who will have charge of this immense territory, will have as his assistant Samuel Wigney, also formerly connected with the Tidewater Co. A substantial organization, both as to personnel and physical facilities, is being developed in the region. It will include warehouses at all principal points, and a strong sales force. This intensive motor oil sales organization will be supported by a carefully planned advertising campaign, including various forms of dealers' helps.

BAY CITY SALES BECOMING BRISK

Slackness of Last Summer and Early Autumn Being Well Compensated for and Some Records Dropping.

Since the opening of the year, automobile distributors in San Francisco have handled a volume of business that is doing much to atone for the comparative slackness during the summer and early autumn of 1921. Sales of new cars are expected to fall off, slightly at least, during the summer months, but so far there is hardly a distributor who has reason for complaint.

Harry Weihe, general sales manager of Pacific Nash Motor Co., Nash and La Fayette distributors, reports an instance showing the vary satisfactory demand for the higher priced cars. Two prospective La Fayette buyers insisted on early delivery, and Mr. Weihe had to apply to the Los Angeles agency. He and Carl J. Simpson, manager of the Pacific Nash Co., went by train to Los Angeles, took the cars directly from the sales floor there, and drove them back.

Chester N. Weaver Co. made more retail sales of Studebaker cars in San Francisco in March than in any previous month in its history. It broke one sales record after another in 1919, 1920, and the spring of 1921, when, in April, it attained a high mark that stood until March of this year.

Greer-Robbins Co. also reports March as its banner month for sales of Hupmobile cars in San Francisco, as was true of its Los Angeles branch.

Philip S. Cole, Haynes distributor, says the complete Haynes 75 line of seven models now is on display in San Francisco, and that sales are active enough to make a shortage within 90 days very probable, unless factory shipments can be increased.

The visit of H. H. Bassett, president, and E. T. Strong, general sales manager of Buick Motor Co., Flint, Mich., was the occasion for a gathering at the headquarters of Howard Automobile Co. of Buick dealers from near and distant California points. Talks delivered by both factory heads injected a spirit of vigor and enterprise that caused the departure of the out-of-town dealers to be a typical drive-away of new cars, with enough orders placed on the Howard books to absorb factory shipments for weeks to come.

J. W. Frawley Motor Co., which recently expanded its capitalization to $50,000, has moved to larger quarters, 1135 Van Ness Ave., owing to excellent demand for the Gardner car in Northern California.

Federal Motor Truck Co., direct factory branch, 1123 Post St., is building up a powerful distributing system up and down the Coast, and numerous dealers have been appointed in the smaller centers during the past 30 days.

Among new passenger car models placed on display recently are the Lexington model U; Cole tourster; Jewett 5 passenger touring car and sedan, the first models to be seen on the Coast; H. C. S. coupe; Rickenbacker, all models, and also making their first appearance; and the Oldsmobile 4 sport model.

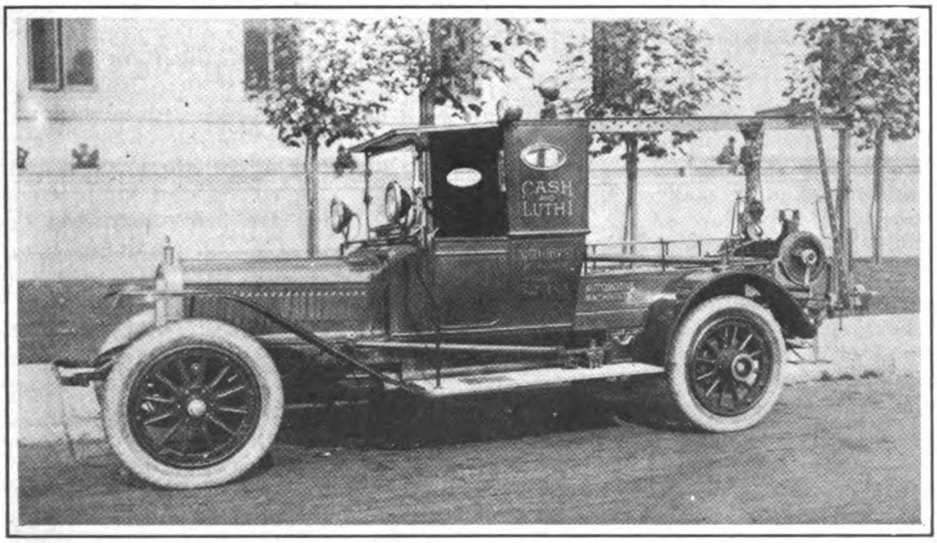
Cole Motors, Inc., handling the Cole, has appointed L. F. Chase retail sales manager.

Pacific Nash Motor Co., Nash distributor, has made Harold C. Hart wholesale manager in charge of territorial sales in Northern California, Nevada and Utah.

Harry W. Frister, well known in Northern California motor car circles, and who has been on the San Francisco sales staff of Leach-Biltwell Motor Car Co., Los Angeles, several months, on April 1 became manager of its branch at 1906 Van Ness Ave.

Preparations are on in earnest for fitting observance of Call of the Open Road Week, to be celebrated in San Francisco April 24-29. A number of dealers have elaborate plans. Don Lee, for example, has announced that the first and second floors of his great building on Van Ness Ave., representing 30,000 square feet, will be given over to a sportsmen's show, a combined exhibit of the best there is of the products made and handled by the city's leading sporting and outing goods concerns and stores.

The Motor Car Dealers' Association of San Francisco has begun distributing $20,000, set aside for charitable and civic work, according to A. F. Lemberger, general manager. Five large-scale local charity organizations, and the Boy Scouts, have been thus favored so far, with contributions of $1000 to $1500.



NOVEL WRECKING CAR OPERATED BY CASH & LUTHI, SAN FRANCISCO.

The picture shows a novel wrecking car that has been built by Cash & Luthi, garagemen of San Francisco. The car is equipped with an overhead track which carries a Kimkin towing dolly, and is also used in lifting cars clear of the road without the use of jacks. There is a ½-ton chain block which is on a traveling trolley running on the overhead track which extends 2 feet 10 inches over the wrecked car, allowing the use of cables to lift the wrecked car into position. When used in lifting cars in this manner, two rods are extended from the rear of the car frame to the ground, taking the strain off the wrecking car. Ordinarily the Kimkin towing dolly is held in the sub-frame and supported from the chain block. On the rear of the overhead track there is a large searchlight for facilitating night work. The car also carries a Kimkin universal one-man tow bar, which is used in towing disabled cars when all the wheels are in running condition.

No Change in Coast Branch.

American Gear Co., of Chicago, has purchased outright the business of the Adams Gear Co., of Muncie, Ind., the deal having been completed on March 31. The change, however, will not affect the personnel of the San Francisco branch of the former Adams Gear Co., which will continue under the same management. It is claimed American Gear Co. is now the largest gear replacement concern in the world, and that it has upward of one million gears in operation.

Do-It-Now Week in Seattle.

The King County division of the Washington Automotive Trade Association is observing Do-It-Now Week, starting April 9, corresponding to the Repair-It-Now campaign waged recently in California. On Monday, the first day, there was a great parade in Seattle, made up of 12 sections, including new cars introduced by distributors, and interesting and elaborate exhibits entered by repair and service concerns.

NEARER THE CALL OF YE OPEN ROAD

Los Angeles Trade to Make Much More of Period than Last Year—Orders for Cars and Trucks Grow.

With two weeks yet to elapse, already there is considerable anticipation and preparation among Los Angeles automobile distributors and the general trade concerning Call of the Open Road Week, scheduled for May 1-6, (changed from May 1-8). It will be observed much more extensively than it was last spring, which was the first time the idea was given real recognition by Los Angeles distributors as an excellent means of strengthening the spring car buying impulse. Agency sales rooms and windows will be decorated elaborately, and there will be parades, driving contests, extensive newspaper and billboard .advertising, and other forms of publicity.

One of the premier events will be a ladies' driving contest, the afternoon of May 4 and 5 at Exposition Park, for which details have been arranged by E. B. Lefferts, head of the safety bureau of the Automobile Club of Southern California. Contestants must be amateurs and will be in two classes, those driving cars up to and including 115 inch wheelbase, and of cars of 116 inch wheelbase and over.

A week later—Friday and Saturday, May 12-13—will come the seventh annual Los Angeles-to-Camp Curry economy run, which also is receiving much thought and preparation. The time originally set was May 5-6, but was changed to avoid interference with proper celebration of Call of the Open Road Week. Last year 21 cars were entered, and the 1922 list is expected to be still larger.

Meanwhile business is good with passenger car dealers, and improving steadily for motor truck sales. In the service end of their business there has been some discussion over the present price range on car parts furnished by the factory, which some dealers complain is exposing them to destructive competition from bargain parts houses and shops. It has been suggested that the factories concentrate such price reductions as are possible upon minor parts, where most of the competition is felt, whle maintaining prices on larger components more difficult to duplicate.

Howard Automobile Co., Buick distributor, announces that the Flint, Mich., factory has been shipping 30 cars a day to the Coast for the past two weeks. At the time of the visit of H. H. Bassett, president, and E. T. Strong, general sales manager of Buick Motor Co., the Los Angeles and San Francisco branches of Howard, ordered 1200 cars for April delivery.

Paul G. Hoffman, Inc., sold 602 Studebaker cars in Southern Calfornia in the first three months of 1922, compared with 321 in the same period last year. Monthly sales this year were 184 in January, 165 in February and 253 in March, against corresponding monthly totals of 69, 114 and 138 in 1921.

California-Oakland Motor Car Co. has relinquished its San Francisco branch to Oakland Motor Car Co., Pontiac, Mich., to serve as a direct factory branch, and will concentrate henceforth on Southern California. This concern started in 1882 as Hawley, King & Co., selling farm implements, carriages and bicycles 30 years before adding automobiles.

Leon T. Shettler Co., which opened recently with the Rickenbacker agency, has announced appointment of Chase Garfield as vice president and retail sales manager; Lewis F. Reed, vice president and wholesale sales manager; and Louis Nikrent, service manager.

IN GOD'S COUNTRY.

George W. Franklin, former president of Detroit Automobile Dealers' Association, and a leading Detroit distributor, wrote recently from Los Angeles to his former home:

"I am more than pleased with Southern California every day, and am afraid the world would have a hard time pulling me from this part of the country. I've accepted a position as sales manager with Lynn C. Buxton, one of the old timers. Haynes is going over in wonderful shape. To my old friends, kindest regards. I will always be glad to see them when they visit God's country."

H. J. Coger, vice president and general manager of Troy Motor Sales Co., Nash and La Fayette distributor, since it was founded 5 years ago, has sold his interests in the company to his associate, John J. Troy, and will take a vacation in the Far East or South Seas before resuming automotive connections in Los Angeles.

"Doc" Green has been made sales manager of Los Angeles-Lexington Co., Lexington distributor, this being the fourth car with the sale of which he has been associated in the past 18 years in Los Angeles.

Western Motors Co., Los Angeles branch, sold 27 Wills Sainte Claire cars in March, and has delivered 156 since it took the agency 13 months ago.

During the visit of Don Lee to the Cadillac factory it was announced that his sales branches at San Francisco and Los Angeles had passed New York and Chicago in Cadillac sales. In March alone, Lee sales in California were 236.

Robert P. Fite Co. delivered 22 new Chevrolet cars in Los Angeles and Kern Counties in March.

New models recently appearing are the Kissel coach sedan, Jewett car types, Hupmobile coupe-roadster, and Rickenbacker phaeton, coupe and sedan.

A new distributing agency is for the National car, placed with H. A. Burgess, 1049 S. Flower St., for Southern California.

George C. Goodrum has sold his interest in Mission Motor Co., Dort agency, to his associates, but retains his interest in Commercial Motors Co., Republic truck distributor. He was a dealer in Oregon 14 years and came to Los Angeles three years ago.

Moon Motors Co., handling the Moon car, has moved to a larger building, 1015-17 South Grand Ave.

C. W. McKelvey, who was Liberty car distributor for the past two years, has not severed his connection with the taking over of the agency by Thomason Motor Car Co., but is now field manager for Thomason.

Harry M. Jewett, president of Paige-Detroit Motor Car Co. and head of the organization manufacturing the new Jewett car, arrived in Los Angeles almost simultaneously with the first model to reach the Coast. He says that the farmer is cured of the notion that he was the only one taking losses in the past two years, and now all industries are back on firm ground. The Liberty factory has produced 50 per cent more cars already than in all 1921, and could ship 50 per cent more than it actually is sending out.

Trouble in the A. A. A.

Late news from Washington, D. C., American Automobile Association headquarters, is that William Ullman, for 8 years editor of American Motorist, has resigned that position and the secretaryship of the District of Columbia division, and that most of the other officers of that division also have quit. Mr. Ullman says the chief reason is that national officials raised the annual dues from $5 to $10 without consulting the state bodies; that $5 fees would more than cover the association's expenses in Washington; and that management of that division was taken from its advisory board and "put in charge of a crew of professional, nonresident membership campaigners from New York."

The idea that a flivver can buck a locomotive off the track is entirely erroneous.—Los Angeles Times.

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Established 1907
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APRIL 15, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

Westward the Racing Empire

SIX or seven years ago the early decline of automobile racing was confidently foretold, and for several years following it seemed such predictions were justified. Several large Eastern tracks were demolished as unprofitable, others lapsed into desuetude; but since 1919, after the war, there has come a revival, and nowhere is this more noticeable than on the Pacific Coast. There are five fast tracks, at Los Angeles, Cotati (north of San Francisco), San Carlos (south of it), Fresno and Tacoma, and with serious preparations for speedways at Oakland and San Diego the number will be seven by 1923. Races are staged all through the year in this territory, and drivers are finding it profitable to spend most of their time west of the Rockies. Only the Indianapolis—and that only once a year—and Uniontown, tracks remain in the East.

How a County Supervisor Thinks

A PROMINENT certified accountant of Detroit, in a masterly analysis of the national tax situation, in which he concluded that the recent enactments by Congress are far from being fair, from a social, economic or any sensible point of view whatever, said careful investigation had proved not one in ten members of Congress had studied the measures passed, adequately; in other words, that Congress on the whole acted unintelligently.

If that is so—and some millions of business men believe it is—surely no deeper thinking should be expected from county supervisors who apparently try to solve highway problems by legislating against commercial progress.

Orange County, California, framed an ordinance specifying maximum motor truck weights not conducive to normal development of transportation in its own limits, and certainly not favorable to commerce with Los Angeles County, which has, for instance, about 800 large trucks alone, compared with perhaps 30 of 5 tons or over in Orange County.

Transportation experts labored with the Orange County supervisors, and it was arranged to have the county's attorney alter the measure. Meantime, however, the first draft had been sent to Riverside and San Bernardino Counties, which also were labored with but, assuming that the ordinance had been adopted by Orange County, they adopted it.

Then Orange County, desiring to be in harmony with its neighbors, rather than correct an error, did the same; and Los Angeles County would have done so also, had not some actual facts of engineering and commerce been placed before its supervisors with extraordinary vehemence and persistence, the result being a compromise whereby Los Angeles County's commerce, internal at least, is not hindered quite as much as might be.

It may be, as California Highway Commission contends, that the maximum weight limit it will ask the next California legislature to set would be fair to users of 5 ton trucks; but it is not fair to users of trucks **and trailers**, by which weight is distributed, to set upon them the same maximum limit as upon a single vehicle with four wheels only. It was shown to the county supervisors mentioned that by use of trailers a considerably larger total weight can be transported, with less damaging weight loaded upon any one set of wheels; yet the county supervisors acted as aforesaid, and the public is permitted, even encouraged, apparently, despite findings of weight inspectors, to believe that the only reason for opposing the proposed maximum weight limit is the alleged selfishness of persons marketing or using very heavy trucks. The weight inspectors have found that most of the overloading is done on relatively small vehicles, which are in the great majority and which hit a hard pace under badly distributed loads.

Even as to single vehicles, without trailers, weight limits have not been fixed intelligently. Data is available whereby close approximation of correct vehicle weight limits for average or specific highway types is quite possible. The American Automobile Association printed such data, obtained after much research co-operatively with the Government, some time ago. Interesting figures could be prepared by motor truck interests—some were printed in Motor West of April 1, but more like them and in more detail should be given much wider publicity—to show the public how lack of scientific regulation wastes the public's money by increasing the cost of transporting many things the public uses. As it is the public, like its county supervisors particularly, centers in condemnation of the heavy motor truck, which is in the wee minority, and on that false basis legislates to the public's own disadvantage.

Some day, no doubt, the public and its servants in highway commission and other offices will awake to the importance of making roads fit vehicles rather than of making vehicles fit roads; and to the wisdom of considering the cost of transportation per ton mile. When that time comes, regulation of commerce so as to conserve roads will be done more reasonably. Today, roads are not built right, as to material, or quantity thereof, or seasoning of sub-base, or width; and laws as to weight and its distribution are such that the life of all roads, especially the many that are built wrongly, actually is shortened.

While Doing It, Do It Well

ONE could fill a book with details of the fact that the best way to do a job is to do it the best way one can do it, the first crack out of the box, and that the efficiency, living expenses, health and happiness of all concerned are affected the wrong way when one makes a habit of trying to "put over" anything but complete, satisfactory service, in the form of goods, work, or anything.

Doing it reasonably right is not enough. Do it as right as you can. Charge a little more if you have to; but there are capable efficiency experts who, by analyzing one's case, can show plainly that one not only actually saves money on one's whole business by not having to do things over, but makes extra money by acquiring a fine reputation, getting new customers, getting orders from old customers without competition, and so on.

These words are superinduced by an experience with a typesetter to whom the idea of including a first reading of proofs, to catch errors in typesetting, as part of his service, did not appeal as being proper and economical, though it is done by many of the country's best concerns; and with a printer whose employes got into the habit of slamming work together somehow and forcing the customer to watch it with a microscope.

Commercial Car Men Confident

COMMERCIAL car makers say improvement has been very noticeable. The increase has not been very much in actual volume, but even the slightest gain is notable now. With increase in building operations, with confidence returning in general business, and with motor trucks worn out during the long period of depression, when each truck was driven to a frazzle to save buying a new one, the upward trend is significant. In time the demand for motor trucks will exceed anything known before, but that demand is not going to come until business in every branch, and the farming business in particular, has reached a reasonably prosperous point.

The truck makers seemingly worry little, realizing that theirs is a waiting game, but a sure one, and that business never will return to the horse.

Have Yet to Learn Economy

BABYHOOD still permeates the automobile industry. Advanced babyhood, to be sure. It has advanced in many ways, and in many ways the railway industry has permitted itself to become covered with moss. In respect to little economies, however, such as utilization of scrap, motor car men could learn much by procuring a copy of the 1921 report of the Southern Pacific's general storekeeper. An astonishing variety of savings and new uses is revealed. The known net saving for the year was $872,276, being the difference between what the cost of new material would have been—$1,309,288—and the cost of reclamation—$437,011.

Production of Cars Is Jumping

As was to be expected, production of passenger cars and trucks for the first quarter of 1922 has shown a very considerable increase over the first quarter of 1921. Manufacturers did not turn out cars to any great extent for storage during the latter days of 1921. They awaited developments and, as was predicted, found a demand which forced rush production to keep up the pace. This demand started early in January, and production jumped from 78,995 in December to 90,486 in January, and then to 116,349 in February. Figures for March are not at hand, but promise to be much larger than for February, and the grand total for the quarter will be far ahead of last year.

Huge Star Car Motor Order

Rumor is that an order for 250,000 motors is about to be placed with Continental Motors Corp., Detroit, by Durant Motors, Inc., for use in the new Star car. The car will be built in all of the divisional plants of Durant Motors, Inc. As a part of this project, it is said, both the Lansing, Mich., and the Long Island City plants will be fitted at once for production of 20,000 cars a month, beginning January 1, 1923.

New York rumor, April 13, is that Pierce-Arrow and LaFayette will merge, with Charles W. Nash chairman and in charge of operations.

Honestly capitalizing friendship is good business.

Calendar of Coming Events

April 16.—Tentative Opening of Automobile Show, Butte, Mont.,. Auspices Kiwanis Club.

April 16—Golden Gate Motor Derby, Greater San Francisco Speedway, San Carlos, 150 Miles.

April 16-23—National Automobile Show, Mexico City.

April 24-29—Call of the Open Road Week, Auspices San Francisco Motor Car Dealers' Assn.

April 24-29—Tenth Annual Convention United States Good Roads Assn. and Bankhead National Highway Assn., and United States Good Roads Show, Phoenix, Ariz.

April 27 (Thursday)—Fourth Annual Raisin Day Race, Fresno Speedway, 150 Miles.

May 1-6—Open Road Week in Los Angeles.

May 7—Speedway Race at Cotati, Calif.

May 12—Dealers' Sociability Run, Fresno to Camp Curry, Yosemite

May 12-13—Seventh Annual Los Angeles-to-Camp Curry (Yosemite) Economy Run.

May 30—500 Mile Race, Indianapolis.

June 3—Salem, Ore., State Fair Dirt Track Races, Sanctioned by A. A. A. J. E. Hickey, Manager.

June 9-24—Automotive Equipment Assn. Convention, Colorado Springs, Colo.

June 20-24—Summer Meeting, Society of Automotive Engineers, White Sulphur Springs, W. Va.

July 4—Eleventh Annual Automobile Race, Tacoma Speedway.

July 4-6—Third Annual Nevada Road Race.

July 15—Grand Prix Road Race in Alsace-Lorraine, Auspices Automobile Club of France.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in Connection with Brazilian Centenary.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Nov. 11—Armistice Day 500 Mile Race, San Carlos, Calif. Purse $50,000; Citizens' Lap Prize Purse, $25,000 or More Additional.

New Nash Dealer Contract

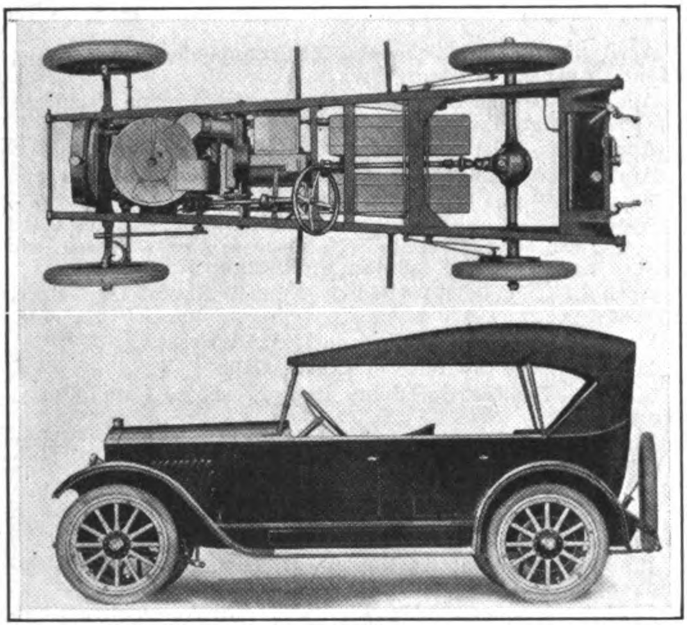
Permanency During Mutually Agreeable Relations, Plus Protection on Price, Are Features

NASH MOTORS CO., Kenosha, Wis., has announced a new form of dealer contract which has two important new features that are certain to be received with high favor by dealers throughout the country. The contract, once written, is perpetual in the sense that it does not have to be rewritten each year, but holds good as long as the business relationship it cements is mutually satisfactory to the factory and the dealer.

The thought behind this clause is stated to be that the company wishes the dealer to feel the permanency of his relationship with the factory, and that he may retain the franchise as long as he continues to give the factory satisfactory representation. The Nash dealer may thus devote all his energies to building his business along lasting and permanent lines, knowing that he will not have to face the uncertainty which always accompanied the signing of new contracts on the yearly basis.

The second important feature of the new Nash contract is that the dealer is given absolute protection on all models of new Nash cars which may have been shipped from the factory during a period of six months immediately prior to the announcement of any price reduction by the factory. The dollar and cents value of this six months protection clause is obvious. It does away absolutely with the possibility of the dealer being caught unprotected at the time of a price change, with a stock of unsold cars.

The new contract is regarded by the trade as being added evidence of the well known Nash interest in the welfare of dealers handling its line.



SOME POINTS ABOUT THE STEWART-COATS STEAMER.

The picture shows the chassis of the Stewart-Coats steamer, and the complete car, to sell at $1085. The selling agent, as previously told, is Coats Steam Car Co., 2337 Michigan Ave., Chicago, which has contracted for the output. The car will be made in the fully equipped and well financed plant of Y. F. Stewart Motor Car Co., Bowling Green, O., of which G. A. Coats, originator of the Coats steam enterprise, is vice president. First deliveries are expected this month. The car, which has shown what are claimed to be amazing road results and which its backers believe promises the return of steam power, has been described before. Its horizontal, 3 cylinder, single acting engine has automatic ignition, fuel being kerosene, distillate or gasoline. It transmits power to rear axle. Ignition is automatic. At maximum pressure, fire is shut off automatically. Starting pressure is obtained in 1½ to 2 minutes, full 600 pound head in 5 minutes. All valves are controlled by one crankshaft. This single camshaft handles forward and reverse speed and makes hook-up, or short cutoff of steam, automatically, meaning maximum efficiency at any opening of throttle. Horsepower is 15, but the power limits of steam are known to be very elastic. On the whole, the car is said to be a wonder in its reduction to the fewest and simplest factors. It is 112 inch wheelbase, is electrically lighted and beautifully finished and upholstered.

Fewer Tires, More Material, Exported

February saw a marked decrease in exports of automobile casings, tubes, and solid tires, and an increase in repair materials. There were exported 73,787 casings, valued at $1,028,467; 46,941 tubes, valued at $101,301. During both January and February the number of automobile tube exports was considerably less than of casings, the ratos being 47 tubes to 74 casings in February, and 49 tubes to 81 casings in January.

Of solid tires, 2388, valued at $68,233, were exported in February, compared with 3890, valued at $147,601, in January.

Value of repair materials exported increased from $10,293 in January to $19,132 in February. Exports of reclaimed rubber showed a marked increase, amounting to $22,004 in February, compared with $15,472 in January. Exports of scrap and old rubber declined from $48,012 in January to $27,663 in February.

England purchased the largest amount of automobile casings in February, taking $220,820 worth. Cuba, Mexico, Argentina, Canada, British South Africa, Norway, and France were also important automobile casing purchasers in February, the amounts ranging from $91,899 for Cuba to $27,968 for France. While England purchased 17,951 casings from the United States in February, she absorbed only 6509 inner tubes. British South Africa took 4309 casings and only 426 tubes. Casings sent to France amounted to 2565, compared with only 180 tubes. Canada, on the other hand, imported 4730 casings and 5988 tubes, and Mexico used 4397 casings and 5814 tubes.

Haynes 75 Averages 75 on Track

An average of 75 miles an hour, over a distance of 10 laps (25 miles) was the speed made by Howard Wilcox, world famous race driver and one-time winner of the Indianapolis 500 mile international classic, in a strictly stock Haynes 75, speedster six, during an official test made recently on the Indianapolis course. The speed was clocked by an electric timing apparatus. Following the test, Mr. Wilcox is said to have stated that the Haynes 75 speedster was the sturdiest and fastest stock car he had ever driven; that it has the necessary speed, stamina and getaway to meet the requirements of the most exacting motorist, and at topmost speed showed a decided lack of motor vibration.

"In ordinary motoring the driver of the Haynes 75 speedster seldom will use more than 50 per cent of the car's capacity, power and speed," states Alton G. Seiberling, vice president and general manager of the Haynes Automobile Co. "This means a longer lived motor than that of a car whose maximum power and speed are required for every day's use."

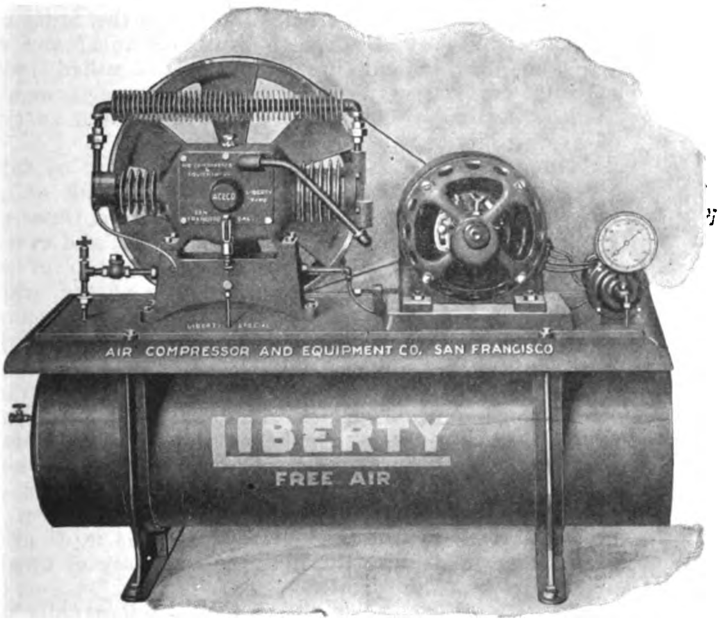
More Bearings Service in Canada

Bearings Service Co., with general offices at Detroit, has opened its second branch in Canada, selecting Winnipeg, Man., as distributing point for the western section of the Dominion. A successful branch has been operating at Toronto, Ont., for some time, but the growing use of automotive vehicles in Canada has made western expansion necessary.

W. L. Spain, a native of Winnipeg, has been selected for manager there. He is an old automobile man, with an excellent record as a district manager for the Chevrolet Motor Co.

The Bearings Service Co. acts as the service department for Timken, Hyatt and New Departure bearing companies. It was formed to give countrywide, immediate service from stock of new and genuine bearings. Complete stocks are carried by every branch and distributor.

New Air for a New Era



Because you "got by" with a leaky, old, half-shot Air Compressor last year is no proof you can do it again. A *new* era has dawned in business. You've got to give *service* this year. Competition is out after your scalp and your business, and if you are wise you will clean house and perk up pronto. A LIBERTY—that's what you need. Free air for the whole highway, pressure that will fill 'em all, from the littlest to the biggest, service that tickles 'em pink, and always brings 'em back. LIBERTY free Air for the *new* ERA. Write us *now* for complete LIBERTY catalog, and full particulars concerning the very easy monthly purchase terms—

AIR COMPRESSOR AND EQUIPMENT CO.
LIBERTY

LIBERTY

2-stage Model A-1½
AIR COMPRESSOR

An ideal model for medium size garages, vulcanizing shops, radiator and sheet metal shops, and for paint spraying. A LIBERTY which includes all the many special LIBERTY features, and represents the highest type of mechanical efficiency in air compressors. Capacity 4 cu. ft. Outfit consists of ¾ H. P. motor, A. C. 110-220 volts, 14" x 48" receiver for 155 lbs. pressure, 4 cu. ft. 2-stage compressor, automatic switch, and fittings as illustrated complete. All parts standard and inter-changeable. A compressor that will soon pay for itself in the money it saves by economical operation. Price—*$280*. Easy monthly terms if desired.

5% discount for cash. Buy through your jobber or direct from factory. Write for catalogue of the complete LIBERTY line—

Made in California

3 sizes and 6 styles—
Sold on liberal terms—
5% discount for cash—
Direct factory service—

AIR COMPRESSOR AND EQUIPMENT CO.
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AIR COMPRESSORS
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AIR COMPRESSOR and EQUIPMENT CO.
46 to 50 NATOMA ST., SAN FRANCISCO 504 SO. SAN PEDRO ST., LOS ANGELES
1433 TO 37 CARROLL AVE., CHICAGO, ILL.

New Stutz Plant Humming

Facts on Personnel, Production Scope and Method, and Great Results the D-H Engine Shows

FOR the first time since its completion, a little more than two years ago, the greatly enlarged factory of Stutz Motor Car Co., at Indianapolis, has been given opportunity to demonstrate what it is capable of, and from all indications it is more than fulfilling the claims of the company's officials. The increased activity at the plant which has attended production of the new Stutz D-H engine, with which all Stutz cars now in production are equipped, has brought the splendid facilities of the huge plant into full play. All of the special machinery required to build the new power plant has been put to work. It is interesting also that practically all of the department heads who were identified with the company when the new plant was conceived have returned to take up the duties which in the beginning were laid out for them. Among them are to be found many who were connected with the Stutz organization when the first car was produced, and later glorified themselves as the drivers of the famous Stutz racing cars.

The Stutz factory in its enlarged condition covers more than 400,000 square feet of factory floor space. It consists of four 4 story structures and one big sawtooth building, in all covering a complete city block. The plant has a maximum capacity of 25 cars a day under the present arrangement, employing from 1200 to 1500 men and women when in full operation.

In producing the new D-H engine, particular stress is being laid on careful inspection and the working to the closest possible limits. Tolerances are held to a minimum that almost seem impracticable for a production of the size which Stutz now anticipates. This same care is reflected throughout, and as the company manufactures under its own roof practically every important unit which goes into the finished car, a degree of scientific selection of materials and final inspection of workmanship and assembly is assured that is at once reflected in the high quality of the finished product. Here is just one illustration to show the extreme to which this policy of care is carried:

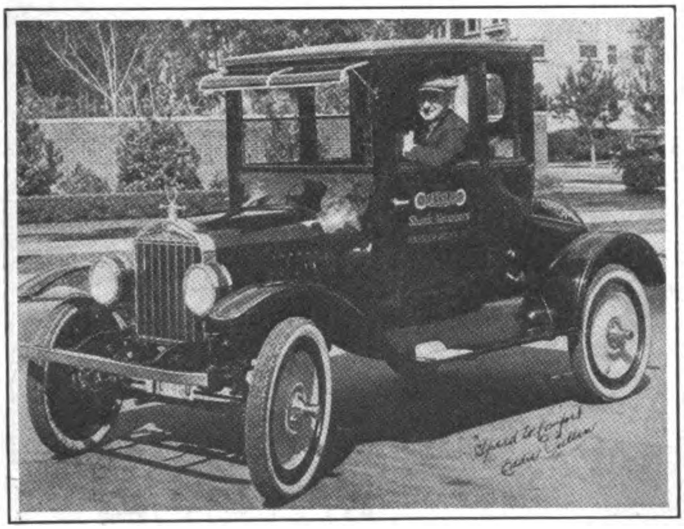
Not a single ounce of simple steel screw stock ever finds its way into a Stutz car. Cap screws with upset heads might be used satisfactorily, but Stutz manufacturing permits no compromise even in the smallest unit, so every piece of screw stock that enters the Stutz car is of special alloy steel made to Stutz formula; and every screw has machine cut threads and a head milled from the bar. Of course, screws do not affect the performance of the car particularly, but the example is cited as typical of Stutz practice.

Connecting rods, however, are a vital part of the engine and here we find Stutz going to the limit of possibility to acquire the greatest efficiency from these parts. The connecting rods are machined all over, and every set of four must balance perfectly. Each piston of a set, likewise, must send the swinging arm of the scale to exactly the same point. Insistence on this perfect balance of every motor part is one secret of the remarkable smoothness of the new Stutz D-H engine.

The same painstaking care is exhibited in the various machining operations which are required to finish the inside of the cylinder heads, the combustion chambers, the cylinders and the crankcase. Checked and rechecked by a large corps of Stutz-trained inspectors, this machine work is done so carefully that absolutely uniform compression in all cylinders is obtained. This is of primary importance in gaining the liquid spontaneity of operation of this new power plant.

In the semi-official trials held at the Indianapolis Motor Speedway some rather surprising results have been shown with the new Stutz cars. Carried to percentages, the figures which are furnished to indicate the capacity of the present Stutz product are impressive. Engineering calculations show that the Stutz with the new D-H engine exhibits an increase in power of 65 per cent, with an increase of 45 per cent in torque. The speed range has been extended 40 per cent, with an increase in acceleration, at 10 to 60 miles an hour, of 90 per cent. Both the average fuel economy and combustion efficiency of the new motor show an increase of 20 per cent. Observers who have witnessed the tests say there is no perceptible vibration at any speed, from the minimum of 5 to the maximum of 90 miles an hour. The D-H engine records 90 horsepower at approximately 2400 r.p.m. It attains a speed of 45 miles per hour in second gear. Spring resiliency is said to be increased 75 per cent. The figures are based on a comparison between the Stutz with the new D-H engine and its predecessor.

Stutz officials forecast a very profitable year for the company. The dealer organization is being augmented and definite increases in production, as indicated by the extensive purchases of raw materials, are planned throughout the present period.



EDDIE PULLEN IN HIS HASSLER-EQUIPPED FORD COUPE.
Eddie Pullen, who was so well known as a race driver that some hardly realize he is out of racing, nevertheless is. All his energies now are used as manager of the Los Angeles branch of Hassler Pacific Co. and the Hassler shock absorber which, he says, thousands of users declare provides the easiest riding, in combination with Ford closed cars, that the market offers, "regardless of wheelbase, weight or price." Pullen's Ford coupe is one of the handsomest in Southern California. He claims it is fully equal, in appearance and riding comfort, to the racing cars in which he held spectators breathless in big races for more than 10 years. He calls it "the great comfort car." The Hassler Pacific Co. has establishments in Seattle, Portland and San Francisco as well as Los Angeles.

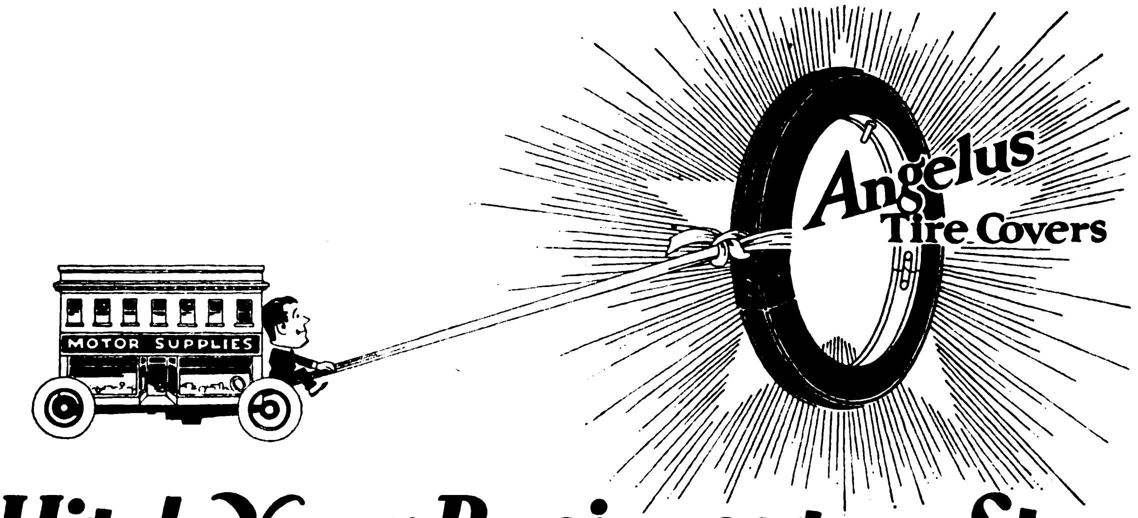
Had Musical Note in Its Cough

William Kerley drove into Mountain Home with an odor coming from the exhaust pipe of his car that made people thirsty. He ran out of gas out in the mountains and couldn't procure any, so he filled his tank with moonshine. It is said the car had a musical note in its cough and was doing the highland fling when it struck town, and that it had to be coaxed before it would run on gasoline again.—Pocohontas, Ark., Star-Herald.

Part of the tremendous waste in distribution in this country can be eliminated by standardization of the quality, quantity and variety of products.—Alvin E. Dodd, of Chamber of Commerce of the United States.

France has built 10,000 miles of road in Algeria, which is its huge wheat field on the north coast of Africa, in the same latitude as Southern California.

France is taking to low priced, 3 wheeled cycle cars.



Hitch Your Business to a Star

It's the "star" in the firmament of Automobile accessories that brings customers to your store—that rings the bell in the good old cash register.

The "ANGELUS" is the bright star in the constellation of Tire Covers that sells the easiest, and once sold, stays sold and wins the buyer's confidence.

"ANGELUS" Tire Covers sell for more than ordinary covers—they are worth much more—just fit an "ANGELUS" to a tire in comparison with any other make. The glove fit of the "Angelus" sells it on sight.

There's a size for every make and type of tire—no misfits—no stretching nor pulling and every feature is guaranteed—materials, workmanship, fit.

The new "Angelus" lettering system enables you to have any emblem, crest or trade mark reproduced on the Tire Cover in any number of colors and so artistically done that the user of the cover is proud to show it on his spare. This is a tip to Motor Car dealers and Tire men. Better look into it.

"Angelus" Tire covers are sold by leading dealers everywhere who buy them only through jobbers. Get your order in to-day if you are not already stocking them. Hitch your business to a star.

the tire cover with the Drain Hole

Angelus Tire Covers

Manufactured by

PARKER & WATERMAN MFG. CO., Los Angeles

Makers of Tire Covers, Cushions, Automobile Trunks

DEALERS SHOULD ORDER THROUGH THEIR JOBBERS

Auburn Sport Full Equipped

Unusual Completeness and Quality of Fitments Give New $2195 Model Distinctive Character

THE trade as well as the public readily accepted the new Auburn sport model, product of Auburn Automobile Co., Auburn, Ind. It is sold fully equipped with everything that pertains to a real sport car. Designed to attract a particular class of buyers, the new Auburn model "made good" instantly at its public premiere—the New York show. Some of the features that make this model outstanding are as follows:

The body, which is very roomy and seats four passengers comfortably, has inlaid walnut instrument board; polished aluminum moulding; beading around body and doors; aluminum hood ledge between hood and body. Upholstery is genuine hand buffed, semi-dull, long grain black leather; deep cushions and high backs. Standard finish is Napier green, with black fenders and flashings, sagebrush green in door panels and disc wheels, with gold leaf striping in panels, wheels and louvres; beading finished black.

Windshield—Low design, windshield wings of special design built integral with windshield; all metal parts made of polished Sterlite, which will not rust or corrode; lower glass stationary.

Top—Double texture top material, cloth lined. Nickelplated slat irons and walnut finished bows; top envelope and top rest irons furnished; side curtains carried in compartment back of front seat; traffic curtain on driver's side.

Radiator—Standard radiator with nickelplated brass shell, and bar filler cap with motometer.

Individual one-piece crown fenders are used, as are polished aluminum steps and trunk brackets.

On each side of the car is a black trunk, with nickel trimmings, and each trunk it fitted with suitcase. Dust covers are provided.

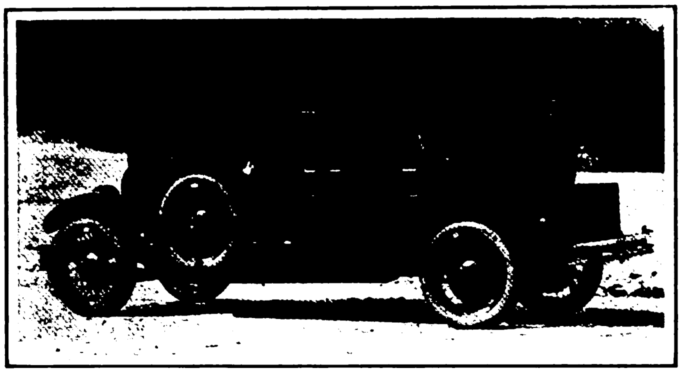
Lights—Large size barrel headlights, full nickel finish; Sterlite brackets, will not rust or corrode; cowl lights, and tail lamp of barrel type to match; parking light on left rear fender. All lights on individual switches. Special lenses.

Wheels—Disteel; extra wheel mounted at rear; tires—five, 32x4½ cord; shock absorbers—Bulldog snubbers front and rear; bumpers—spring duplex, front and rear.

Chassis—The standard 6-51 Auburn chassis, same as used for other 1922 Auburn models.

Additional equipment—Cutout; rim-wind clock; deep-tone, electric motor driven horn; magnetic type speedometer, driven from transmission; complete set of tools carried in special compartment of front door; jack, pump and tire outfit; bevel footboard in tonneau which opens and forms a package compartment; walnut cabinet above.

The price of this Auburn sport model is $2195, completely equipped, f. o. b. Auburn, Ind.



FOUR-PASSENGER SPEEDSTER BROUGHT OUT BY MARMON. The new 4 passenger speedster just introduced by Nordyke & Marmon Co. is a decided departure from the other open cars in its unusual length and lowness and straight lines. Over-all length is 186 inches, exceeding that of any other model, even the 7 passenger touring and closed cars. The height is 73 inches, materially lower than that of any other of the Marmon line except the 2 passenger speedster. Equipment differing from that of the usual open car includes a trunk rack with trunk and cover mounted on the rear. The spare wheel is mounted in a saddle sunk in the left-hand running board. A rear seat width of 41 inches assures the utmost comfort for two passengers. The ample width between the front and rear seats and the stationary foot-rests are other guarantees of roominess and ease of riding. A special compartment in the rear makes a convenient place to carry small packages as well as the curtains and other equipment. With the usual pockets in the doors and the trunk on the rear, the carrying capacity is unusually large. The new car's price is $3950 Indianapolis.

Brazil Likes American Tires

American tires are more popular in Brazil than French, British, Belgian, German and Italian tires, in the order named, according to a report to the Department of Commerce, by J. F. Agan, clerk in the American consulate at Rio de Janeiro.

While 29,307 automobiles were imported into Brazil from January 1, 1907, to December 31, 1920, estimates as to the number of cars in use at the present time range from 14,000 to 25,000. From 6000 to 8000 of these are in Rio de Janeiro and surrounding states.

Inch and metric clincher tires each equip 40 per cent of these cars, and 20 per cent are equipped with straight sides. American straight side tires are freely available. A few foreign makes, such as Dunlop and Englebert also are offered for sale. Practically all American cars are now being brought in on inch clincher and inch straight side tires.

Standardization of the straight side tire in Brazil has been slow, principally because European car manufacturers were reluctant to adopt this type. The fact that certain light American cars which are in wide use in the interior have retained the clincher tire also has delayed the movement toward standardization even among the larger sizes.

One of the several American tire manufacturers represented in Rio de Janeiro distributed a booklet presenting the advantage of the straight side tire. The results gradually are being felt, though it will probably be some time before this type of equipment becomes the deciding factor in the purchase of new cars.

Just a Bunch o' Paragraphs

R. Penn, of Swedesboro, N. J., in a Haynes 55, did 73 miles an hour on the Auburn Road. A snapshot of the instrument board was the proof.

Firestone says: "Don't let your clock run down before you wind it up. The same rules applies to your business. Be liberal in the use of the key—advertising."

Pickens, S. C., had a 3 day automobile-swapping convention. Many of the swappers were old horse traders.

Claiming to be a national journal, and being one, are two different things. Motor West's circulation in some parts of its region exceeds that of all other motor journals combined.

A process for making rubber usable without vulcanizing is claimed by a Singapore man.

Ray W. Sherman, merchandising director of the Automotive Equipment Association, says more than 15,000 persons have been told how to Ask 'Em to Buy.

Ohio has a kaleidoscopic variety of more or less intelligible road signs. At its fifth annual convention the Ohio Automotive Trade Association resolved to try to unscramble the mixture.

The early bird gets the space to park his flivver, remarks the Toledo Blade.

Highway labor prices continue to decrease.

Prices on Gray Announced

Dealership Applications Said to Call for Ten Times the Production Set for This Year

PRICES for the new Gray car, being manufactured by Gray Motor Corp., Detroit, have been made public by Frank L. Klingensmith, president. They are: touring model, $490; coach model, $760; chassis, $420.

Speculation as to the final "price tags" of the Gray car has been keen since F. F. Beall and Mr. Klingensmith announced their plans for the manufacture of a low-priced automobile. It was stated at that time that the car would sell under $500. One result was applications from dealers all over the world. The entire output for 1922 was sold even before the Gray caused a sensation at the various automobile shows. Since the show period, officials state, applications for ten times this year's production have been received. Gossip has put the 1922 schedule at 25,000 cars.

F. F. Beall, in charge of manufacture, has a force of men at work preparing the factory, at Mack Ave. and the Terminal Railroad, for operation. Contracts for raw material have been placed covering the entire season's production, and manufacture of the various units is well under way. . It is expected the first shipments will leave the factory in May.

The Gray car is claimed to embody all of the quality features which hitherto have been found only in much more expensive automobiles. All driving conveniences now demanded by the motor-wise public, including self starter, sliding gear transmission, oil cushioned disc clutch, acceleration pedal and demountable rims have been added. The smooth, powerful, 4 cylinder motor, built in the Gray shops, embodies all the skill and experience which for 15 years has made Gray engines standard the world over. Timken axles and Timken bearings throughout indicate the same high quality for these important units. Riding comfort never before approached in a light car has been obtained by the specially designed alloy steel springs. Quarter semi-elliptic springs in front, and double springs of the same type in the rear, smoothly absorb all minor road irregularities and greatly check the annoying rebound. This makes possible a degree of comfort over rough roads said to be almost incredible as compared to previous standards.

Tests Road Material Automatically

An experiment to determine just how hard rock or gravel must be to be satisfactory in building concrete roads, is being made by the Bureau of Public Roads at the Arlington experimental farms. About 60 sections of experimental road are being constructed, in which practically every variety of stone, gravel, and sand will be used. These sections will be traveled over thousands of times by a machine operated automatically and which has the same effect on the pavement as a motor truck. This will continue until the wearing properties of all the sections are determined. The bureau believes the results will show that many local materials heretofore deemed unsuitable may be used safely in building concrete roads, thereby saving the cost of importing stone, gravel, or sand from a distance.

Roadbuilding Labor Outlook Good

Labor costs on Federal-aid projects under construction this year indicate that there will be no drawback along this line in the building of roads during the coming season, according to the Bureau of Public Roads, United States Department of Agriculture. The price for common labor ranged around 25 and 30 cents an hour in a great majority of the states, being somewhat lower in the Southern states and going up to nearly 50 cents an hour in the Pacific states. The prices of teams reported were in a great many instances as low as the 1914 level. It is probable, however, that there will be an increase when the farming season begins, as teams have always been cheaper in winter.

Tendency Toward Wider Roads

Of 6500 miles of completed Federal aid road for which statistics have been collected by the Bureau of Public Roads, 50 per cent has been constructed of 16 and 18 foot width, 25 per cent of even more width, and 25 per cent of less width. As would be expected, the wider roads have been constructed largely in the more populous states, although some of the less populous ones are building wider main highways. There is a general tendency, it is said, to build wider roads to meet the needs of the constantly increasing traffic, as shown by the 25 per cent of the mileage over 18 feet in width, 7 per cent being 24 feet or wider.

Eighteen-Foot Bridges the Rule

Few highway bridges less than 18 feet wide are now being constructed on improved roads, says the Bureau of Public Roads, of the Department of Agriculture. In the past some of 12 feet and a good many of 16 foot width have been built, but it has proved short-sighted economy. Only one line of traffic can pass over a 12 foot roadway, and 16 feet will not accommodate two lines safely. Many of the states, such as Pennsylvania, New Jersey, Ohio and Massachusetts, have found it advisable in replacing old bridges on important roads to make them wide enough to accommodate three and four lines of traffic.

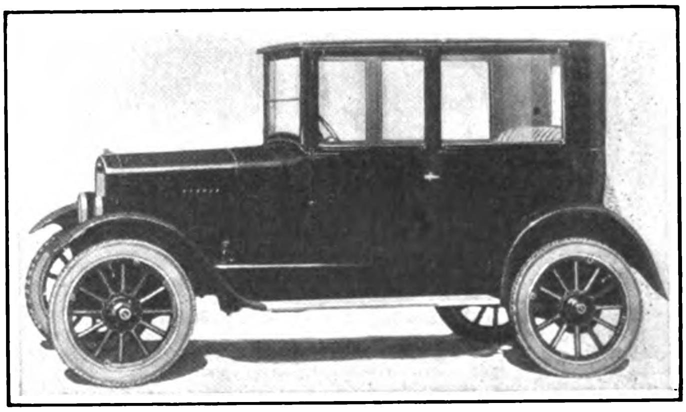
1921 Bond Sales Show Big Increase

In the first 11 months of 1921 more than one billion dollars worth of city, county and state bonds, to be used for the most part in road and street construction, were sold. For the same period in 1912 the sales were $367,000,000 and for the same period in 1916 they were $464,000,000. In the first 11 months of 1920, bond sales of this kind totaled $692,000,000. The 1921 sales are 57 per cent ahead of any year for the past decade. These facts show conclusively that the volume of public work to be done in 1922 will exceed that of any period of 12 months during the past 10 years.

There are no publications that are fully entitled to the claim of being national. Even a regional journal that really covers its field is going some.

In Texas, 1116 miles of surfaced Federal aid roads were built in 1921, the largest record of any state. Minnesota was a close second with 1066 miles.

Railroad net operating income in 1921 was $615,625,619, or 3 1/3 per cent on valuation.



GRAY MOTOR CORP. PRICES ARE: TOURING MODEL, $490; FIVE-PASSENGER COACH, $760; CHASSIS, $420; ALL F. O. B. DETROIT. THE PICTURE IS OF THE COACH.

Export Outlook Encouraging

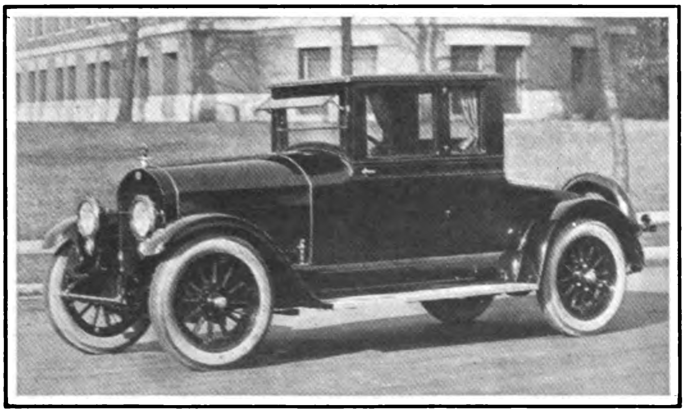
February Figures Beat January's 23 Per Cent—Situation in Certain Countries Described

TOTAL exports of automotive products from the United States during February gained 23 per cent over January, according to figures compiled by the automotive division of the Department of Commerce. A decrease of 2 per cent in number and 15 per cent in value of motor truck shipments was more than offset by an increase of 38 per cent in the value of motor vehicle parts exported, as well as a gain of 29 and 26 per cent, respectively, in the number and value of passenger car shipments. . Passenger cars valued below $800 and over $2000, and motor trucks up to one ton and above 2½ tons capacity, made the best showing. Shipments of electric cars and trucks decreased nearly two-thirds. While exports of motorcycles and parts thereof were subject to a reaction, those of motor boats increased.

Chief markets for passenger cars and motor trucks in February, 1922, were:

Countries of destination	**Number**	**Value**	**Unit Value**
Passenger cars except electric			
Canada	536	$600,684	$1121
Australia	495	448,168	905
Mexico	484	325,396	672
Belgium	364	128,970	354
British South Africa	136	135,339	995
Japan	120	67,553	563
British India	88	84,794	964
New Zealand	88	73,302	833
Argentina	79	77,217	977
Cuba	65	72,449	1115
Netherlands	65	63,152	972
Sweden	62	48,121	776
Motor trucks and buses except electric			
Mexico	88	63,425	721
Canada	85	74,145	872
Japan	60	53,359	889
Australia	30	44,545	1485

The relative position of our leading export markets for passenger cars in February was practically the same one as in January. All the foregoing countries listed, except New Zealand and Australia, showed increases, notably Brtish South Africa, with a gain of somewhat less than 200 per cent; Belgium, with about 200 per cent, as regards the number and 100 per cent as regards value; Canada, Argentina, Cuba and the Netherlands with somewhat less than 100 per cent. The imports into Australia continued the decline whch had been noticed during the preceding month. The unit value of motor cars imported into Belgium dropped from $510 in January to $354 in February.



LATEST COLE MODEL, THE 8-92 TWO-PASSENGER COUPE.

Model 8-92 is the latest body type to be added to the Cole line, and is designed to fill a distinct need. As the name implies, it is a 2 passenger coupe, with ample room for two unusually large people. There is a snugness and exclusiveness about this model, it is claimed, that one does not get in the larger coupes and roadsters. Standard color is Cole blue, with black body panels, sheet metal parts and chassis. Upholstering is either gray hand-buffed Spanish leather or gray cloth. There is a large luggage compartment in the rear deck and one on the right side. Nickel body bars are standard.

The number of motor vehicles in Germany, which in 1920 was only slightly over 50 cent of the number in 1914, again has reached and even exceeded the prewar level, says a report from Commercial Attache Herring, at Berlin. Comparative figures are:

	January, 1914	February, 1920	July 1, 1921
Passenger car	60,876	32,450	60,966
Trucks	9,639	19,742	30,424
Motorcycles	22,557	9,369	26,729

To protect the home industry against competition, importation of foreign cars into Germany is prohibited.

Italy has decided to reduce the taxes on passenger cars for 1922 about 50 per cent, according to reports from Trade Commissioner Osborne and Vice Consul Earle, at Rome. A considerable reduction also has been made on motor trucks. The taxable horsepower is not determined through a direct test for working horsepower, but is merely a fraction of the number of cylinders and the working volume of each cylinder expressed in cubic centimeters. The formula which is applied is the following:

Horsepower—0.08782 x n x v 0.6541
N—Number of cylinders of motor.
V—Cylinder volume (piston area x length of stroke), in cubic centimeters.

Privately owned and operated automobiles, provided they are the property of foreign residents, may remain in Italy free of tax three months following entry. After this period such cars still in Italy must pay 1/12 of the annual tax applicable to them for eachc ensuing month they remain in the country, up to the end of the calendar year.

Acting Commercial Attache Dunn, at Lima, Peru, reports the ad valorem duty on motor cars imported into Peru will be raised 1 per cent upon automobiles and carriages whose price does not exceed Lp. 500, and 2 per cent upon automobiles and carriages whose price exceeds Lp. 500. An internal tax will be levied, amounting to Lp. 1 for Ford cars for hire, Lp. 2 for other cars for hire, and Lp. 5 for private cars, in accordance with a law which was put into effect January 25, 1922. This tax will be levied only on cars actually in use, and only once. The funds will be used exclusively for natonal defense.

Motor Fees Go for Good Roads

Of $108,213,165.35 collected in registration fees from 9,245,195 passenger cars and commercial vehicles, 28,114 trailers and 177,234 motorcycles as well as chauffeurs' licenses in the 48 states and the District of Columbia, January 1 to July 1, 1921, according to the U. S. Bureau of Public Roads, the sum of $101,793,416 or 94 per cent is available for good roads. The total revenue for the year 1920 in registration fees was $102,546,212.25. The revenue for the first half of 1921, therefore, exceeded the entire revenue for 1920 by $5,666,953.08. Of the 9,245,195 registered vehicles, 8,363,427 are passenger cars, 844,110 trucks, and 37,658 are taxis and buses.

The bureau estimates the total expenditure for construction and maintenance of roads in the country in 1921 was $600,000,000. The sources of this fund are approximately as follows: Motor vehicle revenue, 19 per cent; state road bonds, 7 per cent; local road bonds 33 per cent; state taxes and appropriations, 12 per cent; Federal aid, 14 per cent; county, township, and district taxes and assessments, 14 per cent; and miscellaneous, 1 per cent.

Where have all those old horns gone—the ones with a low, mournful sound like that of a saxophone?

Statisticians say there are only 13,574 plants in which more than 100 workers are employed.

New Standard Eight Model

Sterling Is Name of Series Improved in Lines and Luxury and Having Airplane Lubrication

STANDARD Motor Car Co., Inc., Pittsburgh, Pa., has brought out a new series of the Standard Eight, the Sterling model. Types included in the new series are the 4 and 7 passenger touring car, the roadster, coupe, sedanette, sedan and vestibule sedan. Improved lines, and luxurious riding qualities, are embodied. Another important feature is the airplane system of motor lubrication, developed during the hectic days of aircraft encounters over the battle lines, which, says Don C. McCord, vice president and general manager, is exclusively a Standard feature. It eliminates the half-filled crankcase, all oil being supplied to cylinders, pistons and internal mechanism by a suction feed pipe leading from an oil reservoir entirely apart from the engine itself. Oil is drawn in through one pipe, distributed by force of a simple gear pump, returned to the reservoir, cooled and filtered, before it again makes a forced circuit through the motor. Clean, cool oil is assured always. Heat being the chief breaking-down agency, and oil heat being much reduced by this airplane principle, engineers are noting with marked interest this Standard advancement. Some remarkable tests have been conducted, which it is said prove the superiority of this feature.

Each of the new Sterling models of the Standard Eight are featured by this airplane development. The reservoir, anchored to the frame beside the right front fender, is filled without lifting the hood. In excess of 2000 miles per gallon is the satisfying result.

At various motor car shows this Standard feature has commanded unusual attention and approval.

One Way Jurors Pass the Hours

A jury does not always spend all its hours discussing its case. J. R. Jackson, of Magnolia Petroleum Co., of Fort Worth, Tex., tells how a jury he was on, when locked up for the night, fell to discussing automobiles after a time, and a vote was taken as to the favorite car—and there was even more disagreement than as to the legal controversy.

"Finally we got to talking about tires," said Mr. Jackson. It developed that many different makes were being used by the twelve men, but upon taking a vote as to the best tire on the market, the vote was unanimous for United States Royal Cords."

Reasons for Perpetual Inventory

A perpetual inventory or stores control system aids manufacturing plants in keeping their investment in materials and supplies to a minimum consistent with efficient operation. This is one of a number of worth-while advantages which accrue from a perpetual inventory, as pointed out in a pamphlet on this subject prepared by the Fabricated Production Department of the Chamber of Commerce of the United States.

The pamphlet explains that "the supply of specific commodities on hand is regulated largely by conditions of purchase, production and demand, and as these things change, so should the level of supply. When goods are scarce and deliveries uncertain a larger reserve of material is necessary than when goods are plentiful and deliveries dependable, and obviously, when demand falls below actual or planned production, future commitments for material must be curtailed.

"By simply ceasing to purchase, a general reduction of material on hand can be effected, but to this method is attached the risk of running out of necessary material. The stores control system will show instantly the supply on hand of specific items and a complete record of their consumption, so that adjustments may be made where the supply is top heavy or the reserve unnecessarily large.

"But a stores control system can aid a minimum investment in material in another direction, for a well planned system of material control will do more than fill and record the demands of foremen. The attempt likewise will be made to guide the selection of stock so that there may not be a needless range of variety, or a surplus of stock. The subject of a minimum investment in material is closely related to the subject of standard sizes and varieties."

Copies of the pamphlet may be had in limited quantities free of charge from the Chamber of Commerce of the United States, Mills Building, Washington, D. C.

Some Figures About Friend Horse

How accurate horse figures that come in are, is not certain. The latest is that the country now has about 20,200,000, compared with 13,537,000 in 1909. Last December the "news" was that horses and mules totaled more than 19,000,000, compared with about 9,000,000 motor vehicles. Recently it was stated that in 10 years, 1910-1920, horses in cities had decreased more than 50 per cent; in Cleveland, 75 per cent. If not in cities, where is Dobbin? Only one answer—in the country; not hauling or carrying humans, much; mostly dubbing around the farm. The other morning a fine horse, pulling a light iron-tired rig, moved along a Los Angeles boulevard at a really good gait; the outfit was in excellent condition and the driver evidently an expert; but it all looked odd, just the same.

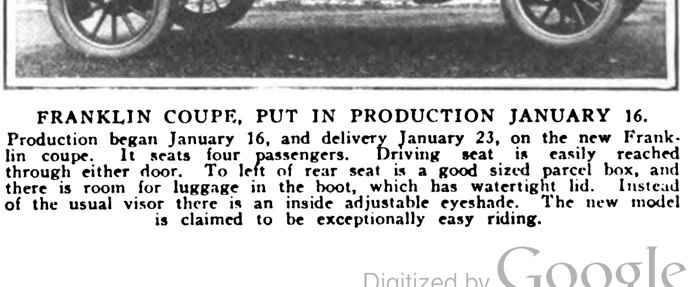
Michigan Roads Tour in July

Having for two years past circled Lake Superior and Lake Michigan on good roads boosting jaunts, Michigan Pikes Association will travel around Lake Michigan in July. The tour will total 1729 miles and 13½ days, starting from Detroit July 7 and ending there July 20. The association will conduct 77 good roads meetings in as many cities on the route. Its membership is made up of good roads enthusiasts from all walks of life, and its object is to accelerate building of better highways and through touring routes. The party will number 150 to 200, and will use 30 to 40 cars and trucks.

Age 101, Goes to Town

Mrs. Nancy K. O'Brien of Osceola, Wis., finds life on the farm considerably less lonely than in the old days. She was born 101 years ago. She sometimes rides 30 miles by automobile from her home to the motion picture theater, and back again the same night.

It is estimated that Australia could absorb 450,000 cars, but has only one-sixth that number in use.



FRANKLIN COUPE, PUT IN PRODUCTION JANUARY 16.

Production began January 16, and delivery January 23, on the new Franklin coupe. It seats four passengers. Driving seat is easily reached through either door. To left of rear seat is a good sized parcel box, and there is room for luggage in the boot, which has watertight lid. Instead of the usual visor there is an inside adjustable eyeshade. The new model is claimed to be exceptionally easy riding.

Figures Show Nation's Need

Federal Road Bureau Says a Picayune Policy Will Delay 7 Per Cent System Many Years

WITH returns received from all states, the Bureau of Public Roads of the United States Department of Agriculture reports that the motor vehicle registration for the year 1921 totaled 10,448,632. This represents an increase of more than a million over the 1920 figures. The increase alone approximately equals the total number of motor vehicles in use at the beginning of 1913.

The largest increases in 1921 registrations were in industrial sections, the agricultural sections in general showing less favorably. No state reported a registration less than in 1920. The total amount collected as fees of various kinds amounted to $122,478,654.

A chart on this page shows the bureau's record of passenger and commercial cars in 1906 and subsequent years, including 1921. It was expected 1921 would show less increase than the figures show. The increase was at approximately the same average as that of the last seven years and shows no indication of the near approach of saturation.

With more than 10,000,000 vehicles in use and the owners demanding improved roads over which to operate them, the question arises as to how long the country will have to wait for a connected system of highways covering the whole United States, say officials of the bureau.

The recent Federal highway act provided for the construction of a connected system of highways consisting of not more than 7 per cent of the roads in each state, and made an initial appropriation of $75,000,000 to be used in conjunction with state funds. The system to be built is being outlined and will comprise about 180,000 miles of road, included in which will be about 60,000 miles already completed.

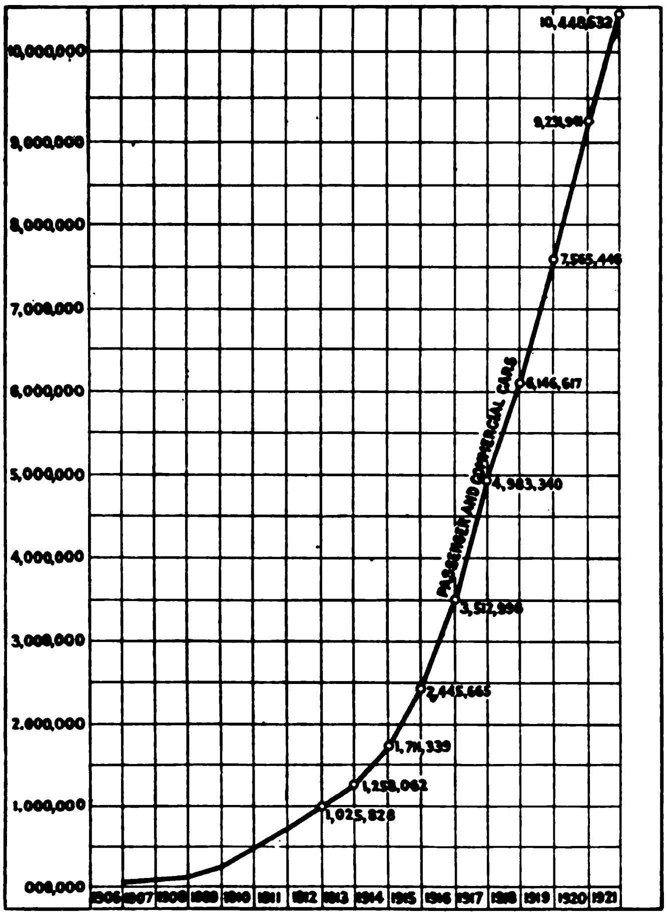


CHART SHOWING BUREAU OF PUBLIC ROADS RECORD OF PASSENGER AND COMMERCIAL CARS SINCE 1906.

With an annual program based on a Federal appropriation of $75,000,000 and assuming that the states will continue to match Federal funds in the same ratio as heretofore, and the average costs of roadbuilding will be $20,000 a mile, officials say it will take 15 years to complete the proposed system. If Federal appropriations are at the rate of $100,000,000 a year the system can be completed in 10 years, and if only $50,000,000 is appropriated annually it will take 20 years to build it. The question is, how long can we wait?

Chicago's 2142 Miles of Paved Streets

Paved streets in Chicago, the best paved city in the United States or Canada, if built in a straight line, would make a paved roadway 40 feet wide, reaching from Lake Michigan to Seattle, Wash. This figure does not include Chicago's 78 miles of boulevards and 151 miles of park drives which connect the city's belt of parks.

Many American cities, and almost all European ones, are without alleys. Chicago's alleys, if built in a straight line, would extend to New York and 700 miles to sea, and the city's paved alleys would make a roadway 16 feet wide from Chicago to Columbus, O.

The area of the city is approximately 200 square miles. It is, roughly speaking, 14 miles wide and 25 miles long at its greatest length and breadth. Within its boundaries are 3257 miles of streets, of which 2143 miles are paved, and 1721 miles of alleys, of which only 316 miles are paved, "streets first" having been the slogan of the board of improvements for years. The board is building from 150 to 200 miles of streets each year.

In 1921 Chicago spent $2,000,000 for street paving, laying a total of 386,000 square yards of pavement, without one cent of cost to abutting property owners. Of the paving laid in 1921 137,608 square yards were of asphalt, 133,304 were of macadam, 41,290 were of brick and 31,837 were of granite block. The asphalt paving in Chicago totals 1130 miles or 49 per cent, that of macadam is 470 or 20 per cent, and of brick 366 or 15 per cent. Other types of pavement are: Portland cement concrete, 150 miles or 6 per cent; granite block, 118 miles or 4.6 per cent; and creosoted blocks, 71 miles or 3 per cent.

Demand for Noiseless City Streets

That there is a growing demand for less noise in city streets is shown in the clamor among citizens and officials in New York and other Eastern cities for a type of pavement that will reduce the noise of heavy motor traffic.

Clifford Pinckney, city engineer of Manhattan, recently adopted the resilient asphalt concrete base for Fifth Avenue with this end in view, claiming that this type of construction takes up the shock of impact.

The Public School Principals' Association of Newark, N. J., has asked its city commission to adopt a paving construction program to extend over four years that will provide noiseless pavements in the vicinity of the schools. In voicing this attitude Newark takes the lead in this respect among the cities of the country. The complaint in Newark is that the constant noise caused by heavy vehicles running over rough or rigid pavements prevents both teachers and pupils from working effectively. The principals believe the increased efficiency permitted by pavements that are smooth, resilient and noiseless will more than compensate for the additional cost.

The action in Newark is in line with conclusions long since reached by hospital authorities everywhere and by the owners of theaters and auditoriums in many places. Professor Stevenson, of Rutgers College, in a recent address before the Philadelphia Engineering Society, emphasized the importance of noiseless street pavements.

The 15 year old girl who won the 1921 Harvey Firestone scholarship, Miss Garland Johnson of Bridgeport, W. Va., wrote an essay on highways against 300,000 high school contestants.

French Market Past Crisis

Automobile Makers, After a Shortage of Materials, Followed by Drop in Trade, Near Normal

According to Baron Petiet, president of the Syndicate of Automobile Manufacturers, the French automobile industry has passed the severe period of the general industrial crisis, and gradually is getting back to a more normal state.

During the war most of the automobile manufacturers in France were busy turning out war materials, and the building of cars was almost negligible. The reason was that the French government found it comparatively easy to purchase abroad such vehicles as were needed for the transportation of troops, and much more difficult to procure arms, munitions, aeroplane engines, gun carriages etc., .at short notice.

At the end of the war the automobile manufacturers found themselves with enlarged factories, equipped with the latest machinery and tools, but deprived of many of the things essential to the resumption of normal trade.

In the first period which followed the armistice most of the factories were flooded with orders which could not readily be filled for lack of raw materials. These rose tremendously in price, upsetting manufacturers' calculations and in many cases causing severe losses. Later came the crisis in business and industry generally, and sales dropped almost to zero. Now, however, orders are again coming in to the factories and the industry has recovered an almost normal activity.

France's 1920 exports of automobiles and accessories reached a total value of 1,187,972,000 francs, according to official statistics received by the Bankers Trust Co., of New York, from its French information service. Increased domestic usage of the automobile by the general public is expected because of the decreasd price of gasoline. In 1919 it was 15 to 16 francs per can of five liters (about 4½ quarts). The present price is 1.7 francs per liter. In some places it can even be purchased for 1.55 francs per liter.

According to recent statistics compiled by the "Information Financiere," the number of automobiles registered in France as belonging to residents of the country totals 236,725. As France has a population of 37,402,550 inhabitants, the ratio is one car to each 158 persons.

Bankers Trust Co. of New York is advised by its French information service that the departments in France which possess the largest number of automobiles are: Seine (Paris), 56,544 (population 4,154,040); Bouches-du-Rhone, 8657 (population 805,500); Nord, 8416 (population 1,961,800); Seine Inferieure, 7161 (population 877,830); Rhone, 7074 (population 915,580.

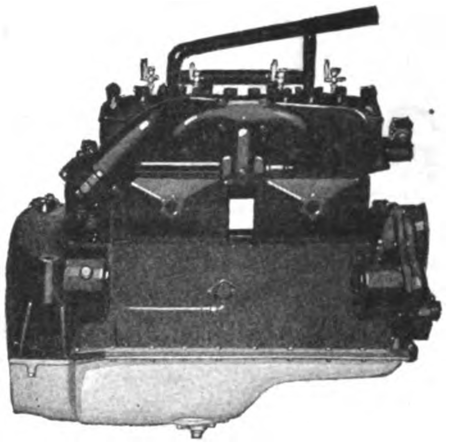
The departments having the fewest automobiles are: Basses-Alpes, 332 (population 107,250); Hautes-Alpes, 210 (population 105,100); Lozere, 128 (population 122,700).

Proposed Automobile Highway in Mexico

The El Paso Automobile Club has started a campaign to make possible an automobile highway from Juarez, following the route of the Mexico Central Railway to Mexico City, says Consul Dye, at Juarez. It is believed funds for construction can be obtained from the cities on the way, and by a grant from the Mexican government.

To Light Roads of Whole Township

The whole township of Amherst, N. Y., near Buffalo, is to have its highways lighted, the total mileage approximating 100 miles. This is claimed to be by far the largest installation yet planned in this country, and the first in which a township has decided to illuminate all its roads.



Engines of Character

Thousands of Hinkley Heavy-Duty Automotive Engines are today in service. These Engines are known, therefore, not for what we say about them but for what they actually accomplish. By this accomplishment they have acquired a history and a reputation beyond any power to add or detract.

Truck and omnibus owners—men who judge only in cold terms of Ton-Miles, and Passenger Miles—are the ones who should tell you about these Engines, and they will.

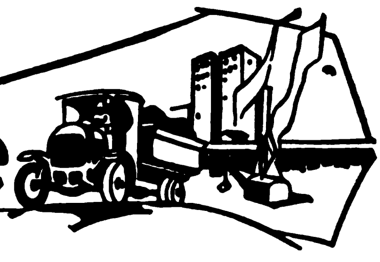
Ask us to put you in touch with them!

World's Champion Motor Truck which, equipped with Hinkley Heavy-Duty Automotive Engine, covered 935 miles in 24 consecutive hours, without stop or slow-down.

HINKLEY
HEAVY DUTY AUTOMOTIVE
ENGINES

HINKLEY MOTORS INCORPORATED
Detroit

The Car of Commerce



A Complete Line of Trucks

Wide Capacity Range of Six Transport Models Shows Great Advance in Meeting Many Needs

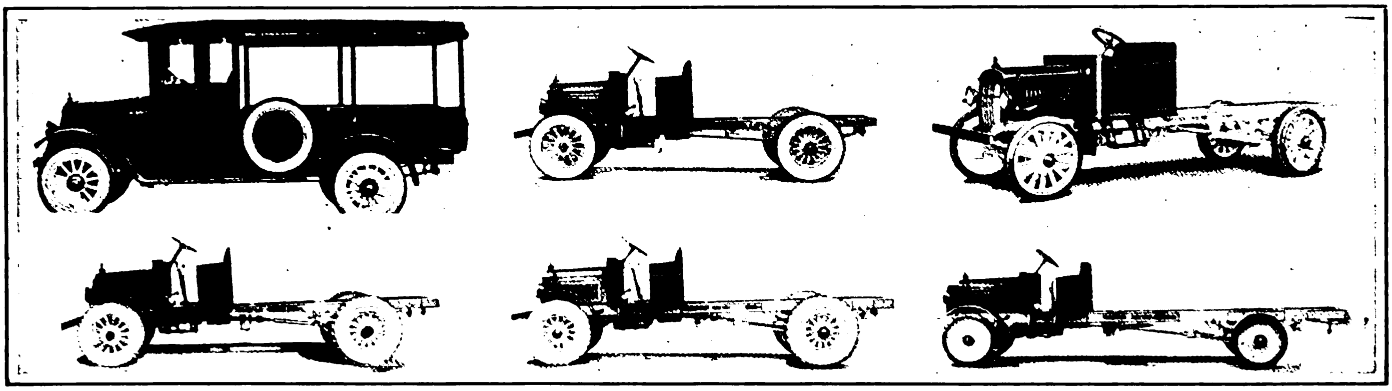
TRANSPORT TRUCK CO., Mount Pleasant, Mich., has completed its line of trucks for 1922. In addition to its wide capacity range, from 2000 to 10,000 pounds, the line embodies many features that mark interesting progress in motor truck constructon and service. Completeness in the latter respect is a marked characteristic. It means that the buyer can obtain a model suited to his average loads. No investment in excessive capacity, or unnecessary cost of upkeep, is needed.

The Rapid Transport, model 15, $1295, of 2000 pound maximum capacity, registers a distinct advance in the field of light, fast transportation. . It travels 35 miles an hour, loaded to capacity, without taxing any part of the mechanism. And combined with the qualities of speed, flexibility and operating economy is a sturdy construction that assures steady, reliable performance, and service-life equalling the heavier capacity trucks. It is designed for retail and wholesale store delivery; for farm hauling; for every kind of 2000-pound transportaton. Transport balanced construction, Transport quality throughout, are stated to be reflected in its astonishing performance ability. It has the Continental N 4 cylinder engine. Rear axle is bevel gear type, with massive nickel steel ring gear and pinion. Driving axles are of nickel steel alloy and uncommonly strong and durable. Transmission is designed and built specially for fast 2000 pound transportation. Fabric universal joints are used, with Snead shafts. . This joint requires no lubrication and is serviced easily. It absorbs severe shocks occasioned by sudden driving strains, likewise protects engine from road shocks delivered to rear wheels. The Snead shaft, though light, is unusually strong and there is absolutely no whipping. This model is regularly equipped with pneumatic tires, electric lights, starter, electric horn, windshield, seat, running boards, fenders, speedometer, jack and tool kit.

Model 25, 3000 pound maximum, offers everything desirable in its capacity class. It is powered by the Buda WU motor. It is said to be easily capable of 30 miles an hour under full load, while extremely short turning radius and general flexibility particularly fit it for quick work in narrow streets, alleys and other places difficult of access. Well suited for use by the farmer in lanes, woods and orchards, while exceptional power and lightness make it thoroughly practical for use in the field. Comfort and convenience are provided in the large, roomy cushions, complete electric light equipment and accessibility.

Model 35, $1885, fits a well-defined need. It is specially designed for 4000 pound maximum loads, which in the past have been taken care of largely by overloading lighter models or underloading those of heavier capacity. Every unit and piece of material is particularly adapted to 4000 pound service. Continental power plant is used. This model meets the requirements of bus service, as the long wheelbase permits a commodious body. It also is adapted to many phases of farm transportation. Ample space on chassis frame permits use of any type body required—for hauling stock, hay, grain, feed and all kinds of produce. The 4 speed transmission enables installation of an engine which effects a substantial saving in operation expense, yet providing ample power to haul full-capacity load. The road speed is 25 miles per hour.

As to model 55, $2385, and model 60, $2585—in general design and construction, these models, for 6000 and 7000 pound maximum loads, respectively, are similar. Engine and rear axle in the larger model, however, are designed for the more severe service to which this truck is subjected. Both have slow speed, heavy duty motors, with armored radiator of sufficient size and proper construction for perfect cooling. Model 60, Buda HTU engine, has extra large crankshaft, camshaft and bearings and is designed throughout for heavier service. Model 55 has Continental C-2 engine. Engines have full force feed lubrication systems. Oil pumps are driven by gears off camshafts and are therefore positive in action, forcing oil through drilled crankshafts to all bearings. Four-speed transmissions enable engines to furnish ample power to handle full-capacity loads under all trucking conditions. Frames are of heavy stock with deep side members and wide flanges. They are inswept between front wheels, to



LINE OF TRANSPORT TRUCKS FOR 1922 HAS CAPACITY RANGE OF FROM 2000 TO 10,000 POUNDS.

Take a look at the trucks comprising the 1922 line of Transport Truck Co., Mount Pleasant, Mich. Above, at left, the Rapid Transport, model 15, $1295, maximum capacity 2000 pounds; center, model 25, $1495, capacity 3000 pounds; right, model 60, $2585, capacity 7000 pounds. **Below, at left,** model 35, $1885, capacity 4000 pounds; center, model 55, $2385, capacity 6000 pounds; right, model 75, $3485, capacity 10,000 pounds.

permit small turning radius. Model 80 is designated as the Contractor's Special, because it meets the very trying service tests demanded in this class of work.

Model 75 10,000 pound maximum, $3485, for heavy duty, is a notable Transport development. Buda YTU 4 cylinder engine is used—a power plant equal to any emergency demanded in 10,000 pound maximum hauling. Has removable head. Gas is superheated by exhaust manifold before drawn into motor, insuring perfect combustion. Transmission has four speeds forward. All gears are 3½ per cent nickel steel, 1 inch face and are in mesh constantly. Changing from one speed to another is by engaging large, heavy clutches, preventing racking of gears and enabling the operator to shift easily from high or fourth gear to any one desired. The superiority of this transmission for 5 ton service is recognized universally. Rear axle is of the internal gear drive type, same general design as on models 25, 35, 55 and 60, except that it is larger, stronger and built in every way for 10,000 pound maximum service. This axle applies 92 per cent of the developed engine power at the point of greatest leverage—near the rim of both driving wheels—thus assuring best results with least waste of energy. Entire weight of chassis, body and load is carried on large, one-piece nickel steel axle. Model 75 has a 12 inch clearance, ample to keep differential housing from dragging and to enable truck to travel anywhere a motor vehicle can be operated. This model is regularly equipped with cast steel wheels, said to completely eliminate wheel trouble due to roads, loads, climate or other causes. The mammoth loads this truck is called on to handle are carried on long, wide, resilient springs. The spring suspension is ideal. Nickel steel spring and shackle bolts are used throughout, with thorough oiling provided by well and wick system. Model 75 shows marked efficiency in the lumber and logging industry, in the oil producing fields, transfer and storage business and all work calling for heavy hauling.

Chassis lubrication on all Transport models is taken care of by the Alemite system, with well and wick oiling for spring and radius rod bolts. Models 35, 55, 60 and 75 have specially designed Transport double action drive shaft service brake, which applies pressure equally to both rear wheels and checks the tendency to skid when turning a corner, by proper control of the faster traveling wheel. A spring cushion on brake rod prevents grabbing action when brakes are applied suddenly. Brake shoes set up slowly, giving a positive, but smooth, velvety action. This brake construction is an exclusive Transport feature.

Radius rod equipment on models 35, 55, 60 and 75 makes it impossible for rear axle to slip on springs, assuring perfect operation of braking mechanism under all conditions. By holding rear axle in perfect alignment with frame, the possibility of undue wear on tires and strain on bearings is also eliminated.

Electric lights, bumper, hub odometer, motometer, radiator guards, jack and tool kit are part of the equipment that is regular throughout the line. Rapid Transport is equipped with starter.

Transport's 1922 line reflects in every phase of design and construction the high ideals which have been maintained by this company from the very beginning. The specifications tell a story of truck values which, the company believes, establish new standards in motor truck transportation.

Why Truck Business is Looking Up

All the old, reliable signs indicate a change for the better has taken place in business. . The use of the motor truck is a barometer of business conditions. More truck sales indicate more hauling being done, and consequently, improved business. . With improving business conditions, the motor truck owner or operator should consider the condition of his equipment. Now is the logical time to replace old equipment and let the saving in operation and upkeep between the old and the new help pay for the new installaton. Many a truck has been running for a year and a half or two years which, under normal conditions, the owner would have discarded. These trucks should now be replaced. Here is a field for the enterprising dealer and salesman who will carefully analyze and take advantage of it. . So says C. J. Helm in Acme Angles, monthly magazine of Acme Motor Truck Co.,. Cadillac, Mich.

New Plant for Kimball Truck

Reaching this year a production of more than 100 Kimball trucks, valued at $500,000, Kimball Motor Truck Co., Los Angeles, is having a new plant erected at Willowville, near Long Beach, in which output is to be doubled, and with later improvements to the new 5-acre site, to about 500 trucks a year. The new factory, already under way and to cost $25,000, has Pacific Electric spur track facilities, and will be 300x50 feet, with brick, terra cotta and glass walls. The Los Angeles plant, now employing 35 men and which never has been forced to close down, according to R. R. Colby, general manager, will be retained as city service branch and general office headquarters.

The Kimball line includes heavy trucks for fast freight work, steel dump trucks, lumber trucks, motor buses, and trucks for general heavy duty work.

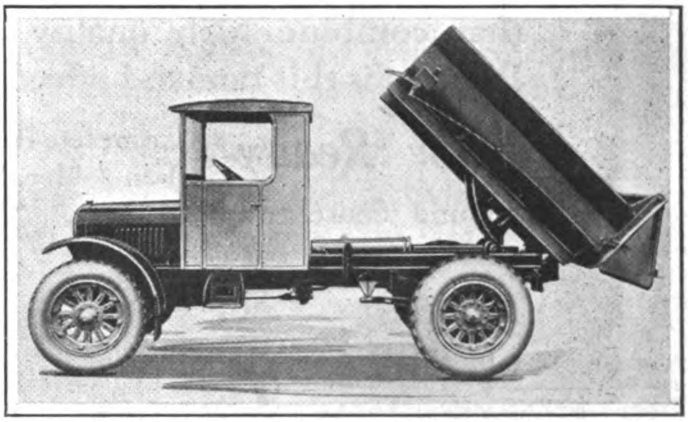
Officers are Charles H. Carleton, president; R. R. Colby, treasurer-general manager; R. H. Freeman, secretary; M. O. Hull, vice president.

8-Wheel Bus Plant in Long Beach

S. C. Kyle, president and general manager of National Axle Corp., San Jose, Calif, has announced the purchase of a 3 acre tract at Long Beach upon which a modern factory building will be started immediately, to assemble the 8 wheel motor buses made by his company under Fageol patents, and to manufacture a new 2 passenger speedster. The axle plant will remain at San Jose. The Fageol patents are basic, he states, and cover the principle of a flexible 8 wheel truck for automotive vehicles, and contracts now being negotiated are for an output valued at $10,000,000.

Martinson Motors to Make Trucks

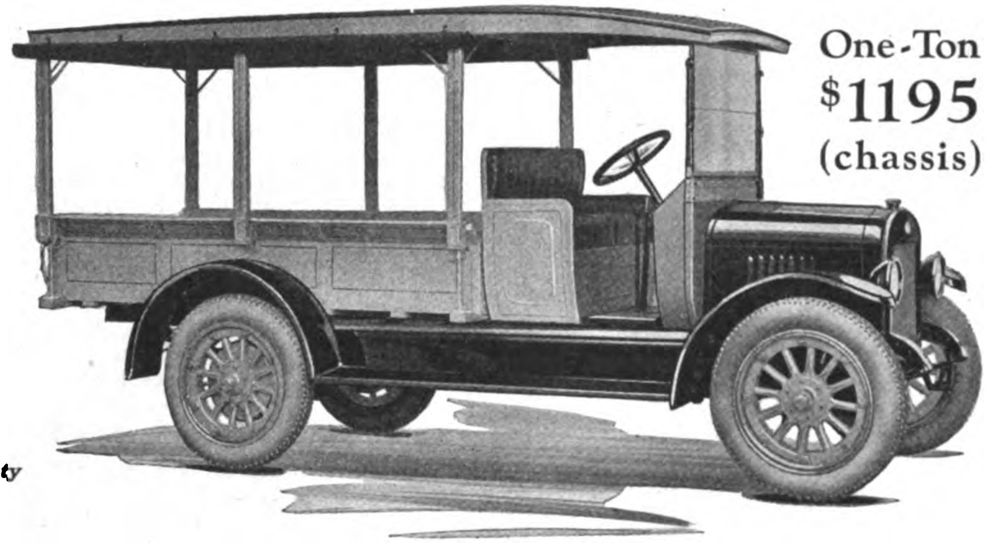
William Martinson, who was formerly first vice president of Winther Motor Truck Co., Kenosha, Wis., and Charles T. Abbott, who formerly was secretary of the same company, have formed Martinson Motors, Inc., to manufacture motor trucks. The capital of the new company is $2,250,000.



NEW DUMP BODY FOR RUGGLES TWO-TONNER.

Ruggles Motor Truck Co., Saginaw, Mich., announces a new dump truck for use in handling coal, dirt, gravel and other materials. This new equipment consists of a Woods steel dump body, mounted on the standard Ruggles 2 ton chassis and equipped with the Woods horizontal hydraulic hoist. The dump body has a capacity of 1½ and 2 yards. The Ruggles 2 ton chassis used with this dump body truck has a 38 h.p. Ruggles-designed engine with 4x5 bore and stroke. The rear axle is a Ruggles-designed double reduction, with airtight steel housing to protect the working parts from dirt, water and other harmful substances. The driver's seat is roomy and very comfortable, with deeply padded cushion springs and plenty of arm and leg room. Standard equipment on this truck consists of oil lights at front and rear, tools and kit, including jack, wheel puller and hand tire pump, seat and cushions, hand horn.

RUGGLES



One-Ton
$1195
(chassis)

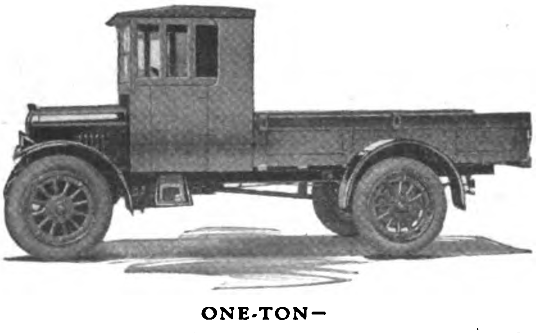
This Emblem
Stands for Quality

65 New Dealers in Four Months

Each month more business men are closing territory for *The World's Greatest Truck Value.* These men sense the outstanding selling advantages of Ruggles Trucks.

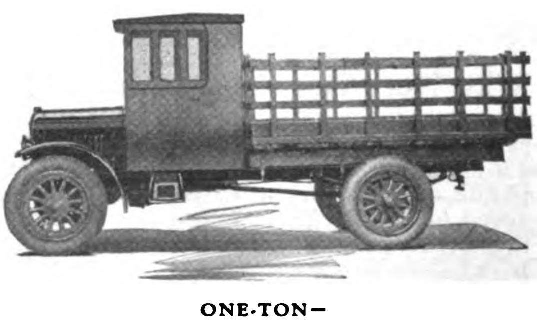
They are equipping themselves for the increased truck demand that is surely coming. The business world thinks more of value than it has thought for years. It demands trucks that combine high quality and low price. Only in the Ruggles is this demand effectively fulfilled.

Now Ready— Complete Ruggles literature: One-Ton folder, Two-Ton folder, "The Men Behind Ruggles Trucks," "Sound Sense from Saginaw," "What Sold Him," and other data.



ONE-TON—

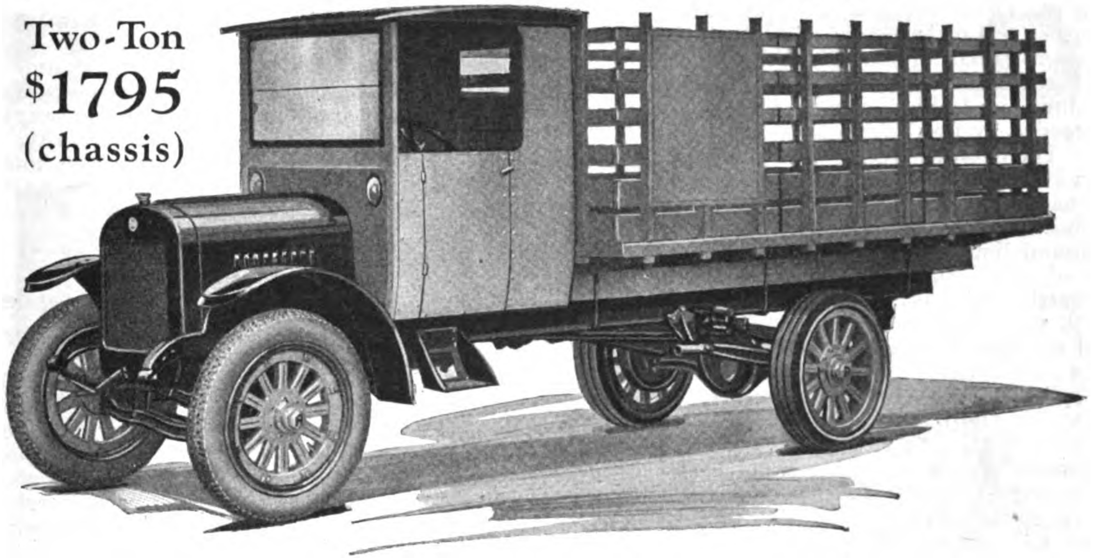
Express Body and Combination Cab. All-around equipment for everyday use in many vocations, especially quick-delivery field. Cab can be fully enclosed, or doors removed in summer.



ONE-TON—

Stake Body and Cab. The Ruggles 5 x 9 stake body with 30-inch stakes. Load fully enclosed, adapting it for hauling milk cans, cases and other bulky loads. Rear and side racks easily removed.

TRUCKS



Two-Ton
$1795
(chassis)

And Just Recently These—

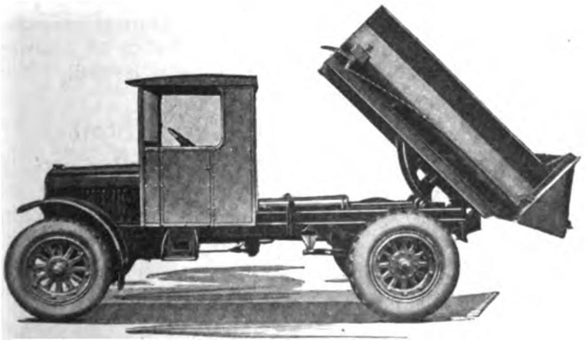
Within the past few weeks business men have taken Ruggles franchises in the following localities: Pittsburgh, Wilkes-Barre, Providence, Worcester, Taunton, Hartford, Columbus, Cincinnati, New Orleans, Charlotteville, Lynchburg, Charlotte, Knoxville, Memphis, Terre Haute, Peoria, Des Moines, Denver, Salt Lake City, San Francisco, Los Angeles.

The Ruggles Truck is securing in a few months a national distribution that usually requires years. This is the highest compliment to the mechanical worth of the truck and the sound merchandising plan that is behind it.

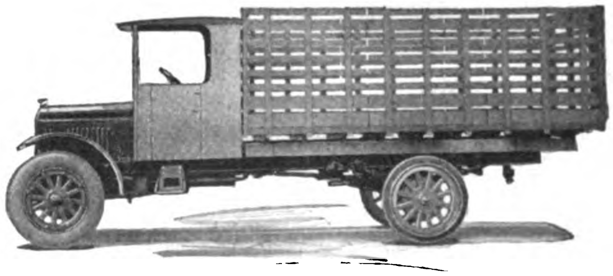
Other towns are rapidly closing. The unusual value of the truck and the remarkable features of the selling plan are securing quick distribution. Your territory may still be open—write or wire for the Ruggles merchandising plan.

RUGGLES MOTOR TRUCK COMPANY, **Saginaw, Michigan**

Canadian Factory: Ruggles Motor Truck Company, Ltd., London, Ont.



Ruggles Two-Ton Truck equipped with horizontal hydraulic hoist and two-yard dump body for the efficient handling of coal, dirt, gravel and similar material.



Ruggles Two-Ton Truck with special stock rack body for hauling live stock, crated merchandise and other bulky objects. Sliding end gate a feature of this body.

Not Hindering Heavy Trucks

California Highway Commission States 22,000 Pound Limit Legislation Would Be Reasonable

CALIFORNIA HIGHWAY COMMISSION declares that in the effort which it and the various county supervisors will make before the next legislature for a reduction in gross load weight limits, there is no thought of attempting to legislate the truck out of business. At present the limit in California is 30,000 pounds, which weight is exceeded by no state in the Union and equalled by only two. The average weight permitted is 22,000, and is the reduced weight limit in most California counties which have passed ordinances designed to protect their county systems.

A 22,000 pound limit, the commission says, will permit the free use of any 5 ton truck loaded to capacity, and where the chassis and body weight is not excessive will allow from ½ to 1 ton overload beyond rated capacity. It is pointed out that this does not seem like legislating the truck out of business. "What it means is protecting from abuse, by excessively heavy or excessively overloaded motor vehicles, a highway investment now aggregating over $150,000,000 in this state.

"The equipment which would be affected by a 22,000 pound limit is negligible. In the entire United States the number of trucks manufactured with a rated capacity in excess of 5 tons is only 1 per cent of the total. Even the 5 ton type is only 2 per cent of the total. It is probable that the same proportion persists in distribution except in those states which prohibit trucks in excess of 5 ton capacity. In that case, with 40,000 trucks registered in California, there would be approximately 400 trucks which would not be able to transport capacity loads and stay under a 22,000 pound gross load limit. Existing equipment could be allowed to operate until worn out under special permits.

"The economy of a heavier trucking unit than 5 ton for general purposes is still a moot question, even from the standpoint of operation and transportation, but there is no question of its present undesirability from a highway standpoint. The consensus of highway engineers and administrators, as obtained by the Engineering News-Record, an authoritative journal, is that 'the 5 ton truck is regarded as the heaviest unit for which, in the present state of the art, highways can be economically constructed and maintained.' And, according to the same authority, 'trucks loaded beyond their rated capacities are recognized by both highway engineers and motor vehicle manufacturers as a menace to highway transport development.' Then, why, may we ask, is a gross weight in excess of 22,000 pounds, which will take care of a 5 ton truck loaded to capacity, and then some, fought by California trucking interests?

THE NEW DUPLEX MODEL AB MOTOR BUS.

Duplex Truck Co., Lansing, Mich., a fleet of whose buses is operating in Washington, D. C., is to the fore in motor bus construction with its model AB, on which it is doing a good business already. No wonder, judging by the specifications and, especially, the interior views shown in the 12 page description. It appears to "have it all over" the so-called "safety" street cars, which have four wheels and are operated by one man. It practically is a luxurious one-man car, with interior finish of mahogany, ash and cherry, with seating capacity for 23 adults and ample aisle space for eight more, standing; with a powerful motor which carried 8300 pounds 935 miles in 24 hours and which is fit for either frequent stops in congested cities, or touring speed between cities; and with pneumatic tires, in behalf of which the company is outspoken and convincing, especially in making comparison with solid tires.

"In this emergency it would seem that the opinion of the supervisors and state highway commissioners, who have charge of the construction and maintenance of all highways in the state, outside of cities, ought to carry more influence with taxpayers than commercial interests, seeking, in behalf of less than 400 truck owners, to maintain a weight limit on the public highways of the state which threatens their structural integrity, to the detriment of the interests of everybody else, including 775,000 other motor vehicle owners. One excessively heavy solid tired truck can do more damage to a highway than 10,000 automobiles running on pneumatics."

Getting After the Overloaders

In a determined effort to stamp out overloading, California Highway Commission has organized an inspection department under direction of Maj. C. L. J. Frohwitter, a retired army officer, who has five assistants, mostly ex-service men deputized by the Motor Vehicle Department. These inspectors, equipped with automobiles and loadometers for weighing trucks on the highways where found, are working through the state where overloading is most flagrant. To date Major Frohwitter reports that 50 per cent of the trucks apprehended violated either the gross weight or tire provisions of the motor vehicle act.

Much of the abuse was due to ignorance of drivers or owners as to the law, and in general they were glad to be put right. However, many cases of serious overloading without excuse came under observation, and drivers were obliged to remove excessive loads before proceeding.

This condition is said to bear out the experience of Connecticut, where the state and Federal road authorities, in a recent survey, found 33 1/3 per cent violations, mostly among trucks from 3½ to 5 ton capacity, some loads being as high as 62 per cent overload, and 69 per cent of trucks on regular trucking lines had a total weight of truck and load in excess of legal limits.

"This condition," says the California commission, "shows the need of more adequate policing of state highways if the highways are to be protected from abuse. It is a most important detail of maintenance, like the stitch in time, and should be a regular function of the state highway department, with ample provision therefor made by the next legislature."

Winther Motors Not Over-Capitalized

Last summer Marwin Truck Corp. and Kenosha Wheel & Axle Co. were consolidated with Winther Motor Truck Co. under the name of Winther Motors, Inc. That, perhaps, was the basis for erroneous reports of enormous recapitalization. Homer Hilton, general sales manager, says the merger was purely for convenience and economical operation; that the authorized capital stock is $1,000,000 preferred and 600,000 no-par shares of common, and that about half of the stock has been issued.

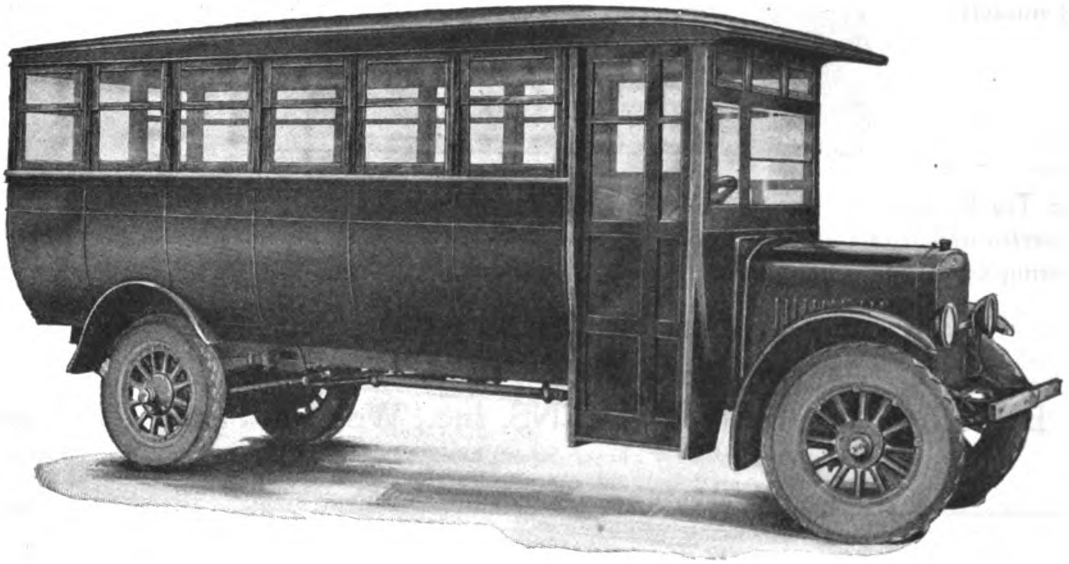
Sutton Now on Signal Truck Staff

M. B. Hoagland, president of Signal Truck Corp., Detroit, has appointed Earle T. Sutton to the factory staff. Mr. Sutton formerly was advertising manager of Denby Motor Truck Co., and prior to that had extensive sales experience, both wholesale and retail. The appointment carries out the Signal policy of maintaining an organization of men of proven fitness.

Lem Loosehead says: I notice a lotta things gits by by being labeled "It is said."

GMC

General Motors Bus



A Twenty-Passenger Bus of New Design

Built particularly for passenger work, this new motorbus embodies many features of construction especially desirable in motorbus operation. Long wheelbase, long flexible springs and a frame under practically the entire body give it perfect riding qualities. Other exclusive GMC features afford marked operating and maintenance economies.

Wheelbase, 178 inches; **Road speed,** governed to 30 miles an hour; **Engine,** GMC design and manufacture, developing 40 horse power at governed speed; **Body,** wood and metal combination 205 inches long, 72 inches wide, 75 inches high inside; **Capacity,** twenty passengers; **Rear axle road clearance,** 8¾ inches; **Tires,** 36 x 6 cord (non-skid); **Springs,** semi-elliptic; front, 42" long; rear, 54" long. **Equipment**—body has two optional seating arrangements for city and interurban use. Seats rattan covered. Electric lights, starter, electric buzzer system, rear vision mirror, electric horn and complete tool equipment.

Send for special booklet giving full particulars

GENERAL MOTORS TRUCK COMPANY
Division of General Motors Corporation
PONTIAC, MICHIGAN
Branches and distributors in principal cities

Please Mention "Motor West" When Writing to the Advertiser

WOLVERINE

36 HOUR SERVICE SAN FRANCISCO TO LOS ANGELES
CALIFORNIA HIGHWAY EXPRESS
HOUSEHOLD GOODS

Electric Lighting
on all models

Electric Starting
on all models

Wolverine Trucks are daily writing new records in transportation history in California by their unequalled performance on regular, scheduled trips to San Francisco and return, carrying capacity loads and rendering continued and faultless service at low cost.

AMERICAN COMMERCIAL CAR CO.
Manufacturers

BRAUN-STECKER-STEVENS, Inc., Western Representatives
823 South Flower Street, Los Angeles, Cal.

Moreland Eleventh in Output Volume

Moreland Motor Truck Co., Los Angeles, according to recent statistics, stood eleventh in the list of American motor truck builders in production volume during 1921. While the figures show that the average business of the truck manufacturers was but 45 per cent of the peak business of 1920, the 1921 business of Moreland was 75 per cent ot its peak production of 1920.

The Moreland plant is said to have been practically alone in truck manufacturing, in never having shut down entirely during the depression a year ago; and it is running under forced draft now, according to General Manager Watt L. Moreland. More than 325 men are employed, and more are being added as fast as materials are available. The matter of material is retarding production because many suppliers had reduced their inventories greatly and have to work to order.

A good volume of orders from all parts of the Coast is coming in for the new 1922 line, including the fast light road runner of 1 ton capacity and the new 1½ ton model, in which the use of high grade alloy steels gives the maximum load capacity with minimum of truck metal weight. On one day recently 7 trucks were produced in one 8 hour shift, and the week totaled 25. About 65 per cent of money paid for labor and supplies goes to some 85 local concerns.

The Moreland Co. has been authorized by the state corporation commission to increase its capital from $1,500,000 to $2,500,000.

Receivers for Ward La France Co.

Oscar N. Reynolds and Alexander S. Diven, of Elmira, N. Y., have been named receivers for Ward La France Truck Co. Application for receivership was made by Leslie L. Zeet of Pittsburgh. The action will keep assets intact, it is said, until bills can be paid. The company claims assets of $280,000, liabilities $180,000. The business is being continued and the receivers say prospects for paying off all debts are favorable. Before the receivers were named, A. Ward La France, president and general manager, notified creditors financial affairs of the company had reached a crisis and that some of the note holders had asked for appointment of a receiver. He expressed the hope that someone would be able to come forward with a satisfactory reorganization plan.

Ruggles to Carry Tourists' Baggage

The first entry for the Michigan Pikes Association's 1922 "Around Lake Michigan" tour, which has as its northern object the Michigan copper country, has been made by Ruggles Motor Truck Co., of Saginaw, Mich. The company is designing a special truck to carry baggage for the Pike tourists. The body will have three decks for baggage and a capacity of 110 suit cases. It will be mounted on a 2 ton chassis and travel at passenger car speeds, as the truck has a maximum rating of 45 miles an hour. The entry was made by General Sales Manager C. R. Carr and the body has been designed by A. G. Boone, chief engineer.

Standard Units for Wachusett Truck

F. S. Suthergreen is president, W. C. Dresser, vice president, E. H. Brown, treasurer, and R. H. Bingham, secretary of the newly formed Wachusett Motors, Inc., Fitchburg, Mass., which will manufacture the Wachusett 2½ ton truck assembled for the New England market from standard units—Continental, Timken, Brown-Lipe, etc.

R. G. Davis has been appointed field service director for Ruggles Motor Truck Co., of Ottawa, Ont., his territory including Ontario and Quebec.

There are 600 motor trucking companies in England, carrying freight distances of 100 miles or more.

McAdamite is replacing brass in machine making.

Tractor Department

Facts Affecting Tractor Interests

AMERICAN and other manufacturers of farm and similar tractors have succeeded finally in interesting Friesland and other north Holland farmers in their product, and have done a fair trade in that line during the past year, according to a report to the Department of Commerce by Consul General Anderson. The United States supplied 53 out of the 102 tractors, steam street locomotives and the like imported last year, having supplied nothing in this class the year before. With the exception of a few machines from Great Britain and the tractors from the United States, practically all the Dutch imports of such machinery have been from Germany.

There are about 300 farm tractors in Rumania, according to a report received by the Department from Consul Palmer, Bucharest. It is estimated that fully one-half of these are of a popular American make.

There should be good opportunities for introduction of Amercan agricultural machinery into Thrace when political conditions become stabilized, according to Consul Morris, Saloniki, Greece. The district has a very rich soil but farming up to the present time has been done for the most part in a very primitive manner. Crops have been limited and of inferior quality. With modern farming machinery the output would be much increased and the quality much better. There are about 75 tractors used in Thrace at present, and more than half are of American make.

Corfu, the Department of Commerce is informed, offers an excellent market for American agricultural implements. It is the richest of the Ionian Islands and produces cereals and vegetables, the production of which can be helped much by tillage with modern agricultural implements and by the use of modern sowing machinery. The olive crop is of importatnce, but great damage is done each year by diseases which might be eradicated by the use of sprays and spraying machinery.

The agricultural implements division of the Department of Commerce is in receipt of a publication issued by the Egyptian Ministry of Agriculture, entitled: Report on the Motor Tractor Trials Organized by the Ministry of Agriculture. This report covers the tractor trials held in Egypt in December, 1920, and in April, 1921. It describes the trials in detail, giving the conditions under which they were held, the various tractors competing, and the performance of each tractor, together with the general results of the trials. The division will loan this copy upon request to those who are interested.

The general manager of South African Railways states that a number of new rubber tired tractors recently introduced in connection with the cartage work in Johannesburg are proving very successful. The load hauled by them averages 70 to 110 tons per day, compared with 24 tons hauled by motor trucks. The quantity of coal consumed in one day by 12 of the new tractors costs very little more than the daily petrol consumption of a single motor truck capable of handling only 24 tons per day.

W. G. Clay, former assistant sales manager of the Traylor Engineering and Mfg. Co., has been promoted to be factory sales marager. Mr. Clay formerly was with Chandler Motor Car Co., Cleveland, and assistant sales manager of Bethlehem Motors Corp., Allentown, Pa.

The Traylor Co., famous for making mining and other heavy machinery, with headquarters in Allentown, Pa., has its truck and farm tractor division in Cornwells Heights, Pa.

Our donation of $21,000,000 worth of corn and wheat to the starving Russians was called a princely gift; but it did more financial good to the American farmer than to anyone else, says the Los Angeles Record. Under the impetus of this exportation, corn in the Middle West rose in price to an amount which represents an increase in value on all our corn on hand of about $40,000,000. That is, it rose, from about nothing, to a point only about 25 per cent under the cost of production. Our agricultural surplus is of no value to us. It pays to give away. In this case it paid 200 per cent on the gift. Europe owes us a lot. And we already have more gold than we know what to do with. Our surpluses are national liabilities rather than assets. So long as this state of thing exists, it would seem the duty of the government to see that a system of credits is set up by which these surpluses might be sold to Europe on time. That would be at least a little better than giving the produce away.

Talk about horse sense! How about hog sense? When you drain the tractor's crankcase, soak the oil into gunny-sacks and wind the sacks around a post in the hog lot. Chances are that all of the hogs that have cooties, or cootie eggs, will know just why you put the sacks there, and rub against them. For hogs which haven't sense enough to be self-oilers, but have cooties, use the oil in a spray. The best time to oil a hog is said to be morning or evening. It helps keep in his heat. The less a pig is like a good radiator, the better he is on the scales and the more "bacon" he helps bring home to the "larder."

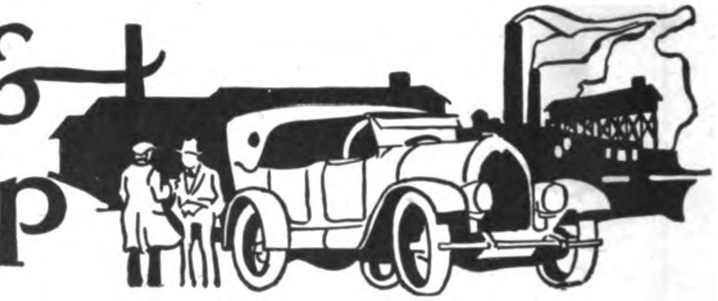
It is common to treat a tractor as many other farm things are treated, that is, to make it spend its whole life in the open air. In the rainy season, with every drop busy on every bit of metal that will rust, this custom may be said to be good business for the man who has new tractors to sell; yet it is bad business. Every member of a community must share in community loss entailed by destruction, by waste or otherwise, of anything the conservation and full use of which will cut the cost of living. The individual's loss, if he wastes a tractor, is the largest loss; and it serves him right.

Inadvertently a law in Utah, forbidding spiked or cleated wheels on highways, was repealed and tractors and trucks so fitted are doing much damage. The new law gives the state highway commission regulatory power but it is said a confirmatory court decision may be called for. Co-operative common sense would be better and much less expensive to the people as a whole.

Senator Moses of New Hampshire calls the agricultural bloc at Washington the Ken-Cap Klan, having in mind Senators Kenyon and Capper, leaders of the farm group. He says the farmers are trying to "soak" the poor rich folks.

Two horses and a hand plow, plus a man hard on the job, can handle 2½ acres a day. A medium size tractor with 4 plow bottom can do 13 acres.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

Sales are heaviest today for makers who have a consistent advertising policy; who follow the lines laid down by P. T. Barnum, who said that there were three things to do to make for success in business—first, advertise; second, advertise; third, advertise. They also follow the rule of John Wanamaker, who said, "When business is good advertise; when it is bad, advertise more."

—

Federal Reserve gives warning, in the light of recent experience, and says we should remember, when we again enter into a period of full prosperity, that a reaction will follow sooner or later. It says if the incoming tide can be controlled so the crest may not be reached too rapidly nor rise too high, the subsequent reaction will be less severe and the next period of industrial and commercial activity and general prosperity will be marked by saner methods, greater achievement along constructive lines, and a longer duration than any we have had before.

—

Fierce competition which is developing throughout the industry is now forcing cutting down overhead costs to the minimum. Every possible waste in manufacturing is being eliminated. Factory profits, where profits are made in a few instances, are at the lowest level. Many manufacturers are still working on the losing side of the ledger, and losses will continue to be enormous until overheads, coupled with stock liquidation, have been brought down.

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As to stock liquidation, one manufacturer, whose production at high point never reached 12 cars per day, had on hand one line of material for full production covering a period of more than 100 days; and with the enforced reduction in production he had sufficient material of this character to last almost a year. With a production this year equal to 1921, some factories still will be working up materials bought in 1920. These will not be able to make money this year at the prices prevailing, and a large majority of the cars will be sold at less than manufacturing cost.

—

E. E. Schwarzkopf, veteran publisher, calls attention to the fact that America's population of adults is about 20,000,000, and that of this number 10,000,000 own motor cars. He says that sales must therefore be almost entirely replacements, but qualifies that statement by calling attention to the babies who are growing up, and who really form the class of new buyers—that is, of starters in the field of car owners. As business exists at this time the new buyers—or new owners might be better—take the place of those forced to give up their cars for the time being through inability to meet the expense. (Editorial note—the 1920 census put total population at 105,683,108, including 27,000,000 men and 24,000,000 women more than 21 years of age.)

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There seems to be a feeling, after careful analysis, that months following March may not show as large gains as in March. Careful estimators have figured out the potential market, state by state, and chances for export business, and say they will be satisfied with a business for 1922 equal to that of 1921, when the total number of cars made, including Fords, was 1,700,000. That figure, it is believed, will be the "normal" for some years to come, and is representative, on safe estimates, of replacements of about one car in six yearly, based upon 10,000,000 cars, and the places of the outgoing motorists being taken by the babies that grow up, withdrawals being met in about equal number by the newcomers.

—

The unexpected production of last year is considered large for the 50 per cent buying power of the country for that year. Replacements made up much of the business, except that of Ford, who was called upon to supply an unusual number of cars to business men and others unable to afford a higher priced machine, due to general business conditions. As these conditions improve it is assumed Ford sales will drop off in fields other than farming, but will be maintained as a whole by natural increases in the farmer communities, where replacements of worn-out cars will have to be made. The motor car is indispensable to the farmers who has, by the very nature of things, been forced to run his present mount "ragged" while awaiting improvement in the market for his productions. Increases in the price of wheat, corn, oats and other commodities promise to provide the farmer with the wherewithal, and he will re-enter the field as a buyer in automotives, and his natural purchase will be in the field of the lesser-priced cars.

The condition of farmers is such that they will hardly feel disposed to spread themselves and to again become wild spenders as of old. The watchword of the farmer will be economy for a period of years. He has been taught a much needed lesson. Prior to the slump he was the "easy mark" among stock sellers of every sort in the field of faking. Farmers lost millions of dollars through unfortunate investments. During their period of hard times, waiting for a revival of prices which would allow them to rid themselves of their produce at a figure higher than production cost, they have had opportunity to think, and to plan for economies in the future.

—

To date there has been little occurring to enable motor car manufacturers to properly gauge the year. They do not talk today of the "buyers' strike," but they do talk of the "buying power." The buyer does a lot of looking, inquiring, and thinking, and often makes up his mind to wait just a little bit longer to see just what is going to happen. For instance, all motor car shows, with the possible exception of one, or at the outside two, have been successful beyond record for attendance, and have been claimed to have beaten retail buying figures in many instances, but all have lacked real buying by the dealer.

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Financial matters have had much to do with the dealers' fix. Bankers, who watch carefully, have studied the public rather than the dealer or the distributor, and have not loosened up with the necessary financial backing to enable the dealer to close with the maker. Bankers know the attitude of their depositors, and when the people show they are satisfied with prices as they are, and really talk of immediate buying, banks will loosen up and dealers will be rushing into the factories at Detroit, Indianapolis, Cleveland and elsewhere with hurry-up orders which will surely swamp the makers.

—

A plan has been revived for merging a number of smaller rubber companies. During the last two years the plan has been discussed from time to time. At one time it was said F. A. Seiberling would be at the head. The general purpose was to decrease overhead expense and so meet keen competition the next few years.

Standardizing pays. Few know it.

Church Developing Something

H. D. Church of Fairfield, Conn., formerly a chief engineer of Packard Motor Car Co., and later vice president in charge of engineering of Hare's Motors, Inc., is at work in a consulting capacity on several important developments. As vice president of Hare's, Mr. Church developed completely a medium weight 6 cylinder model embodying many advanced features of design and exceptionally well adapted in every way to meet the requirements of the present passenger car market. It is said his present activities include work upon another new and unusually interesting light model.

Mr. Church's professional standing and past experience give unusual interest to the announcement, and to the fact that his services are now available as consulting engineer.

* * *

Webb Joins Hinkley Motors.

Charles A. Neville, sales manager of Hinkley Motors, Inc., Detroit, announces Paul St. Elmo Webb as sales promotion manager. Mr. Webb has had a broad range of service in the field of heavy duty transportation, both as an executive of sales and service and as a transportation engineer with the Diamond T Truck Co., of Nashville, Tenn. In his new position Mr. Webb will pay close attention to the application of Hinkley-engined trucks and buses to the various transportation problems continually arising. He will also work in close touch with dealers and distributors of Hinkley-engined vehicles desiring data, information and counsel.

* * *

Wills Steel Plant in Canada.

C. Harold Wills and others are organizing a $3,000,000 steel company at Sarnia, Ont. The plant will be erected opposite Marysville, Mich., on the Canadian side of St. Claire River. The product will be certain alloy steels to supply Canadian automotive manufacturers. Among the directors, in addition to C. H. Wills, are H. R. Jones, president of United Alloy Steel Corp.; J. J. Mahon, former chief engineer of Crucible Steel Co.; and George A. Simpson, of Steel Co. of America. The output of the first year is contemplated at 50,000 tons, and power will be furnished by Niagara.

* * *

Vail Stays with Waltham.

E. L. Vail, who practically created and developed the business of Waltham Watch Co. on Waltham clocks, and later introduced the Waltham speedometer, resigned as head of the automobile equipment division, to take effect April 1. At the request of the company Mr. Vail reconsidered, and signed up for a period of years as manager of the automotive equipment division, having immediate supervision over sales and service in that department.

* * *

To Make Rudge-Whitworth Wheel.

Marlin-Rockwell Corp. has organized a subsidiary, Marlin Wire Wheel Corp., to take over manufacture of the Rudge-Whitworth wire wheel. Manufactured under a license giving exclusive use of that name in this country, the wheel has been made heretofore by a division of the parent corporation. It is believed the formation of the new corporation will give impetus to sales efforts.

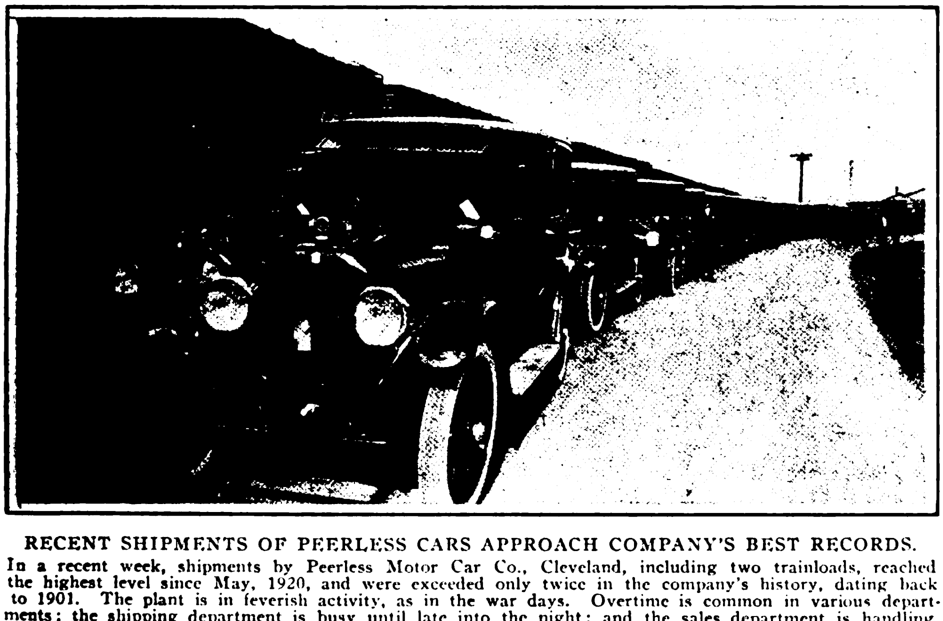
* * *

Wheelock Back in Harness.

H. K. Wheelock has returned as manager of Western Vulcanizer Mfg. Co., Chicago, from which he retired a year ago to regain his health. W. J. Jarratt, who filled Mr. Wheelock's post during his absence, has withdrawn from the company.

* * *

The touring bug begins to bite.



RECENT SHIPMENTS OF PEERLESS CARS APPROACH COMPANY'S BEST RECORDS.

In a recent week, shipments by Peerless Motor Car Co., Cleveland, including two trainloads, reached the highest level since May, 1920, and were exceeded only twice in the company's history, dating back to 1901. The plant is in feverish activity, as in the war days. Overtime is common in various departments; the shipping department is busy until late into the night; and the sales department is handling an unusual number of applications for the Peerless franchise.

Earl District Sales Supervisors.

N. B. Reisinger, who has traveled the Milwaukee territory many years, has been appointed district sales supervisor for Earl Motors, Inc., in that territory.

For the Cincinnati district Harold D. Morgan, who formerly traveled out of Cincinnati in a wholesale capacity for a Cincinnati distributor, has been appointed. Mr. Morgan is the son of George C. Morgan, general sales manager for Earl Motors, Inc., and has established an unusual sales record for the short time he has been with the company.

Kansas City district sales supervisor is A. B. Walker, who has been active in the automobile industry ten years. He has had extensive retail and wholesale experience both in Illinois and Kansas City territories.

* * *

A. G. Partridge With Goodrich

W. O. Rutherford, vice president in charge of sales of B. F. Goodrich Rubber Co., announces appointment of A. G. Partridge to special sales work in the tire division. For several years Mr. Partridge was vice president in charge of sales of Firestone Tire & Rubber Co., and later was engaged in a similar capacity with the Star Rubber Co. His duties with Goodrich will be confined largely to direction and development of sales, where his wide experience and knowledge of the rubber business will fit in particularly well.

* * *

Pfeffer Consulting Engineer Now.

Clarence A. Pfeffer, formerly president of Saxon Motor Car Corp., has formed a consulting engineering company under the corporate name of C. A. Pfeffer & Associates, which will specialize in financial problems within the industry. New York and Chicago men will be affiliated with Mr. Pfeffer. Main offices will be in Penobscot Building, Detroit, and branches in New York and Chicago.

* * *

Wills Financed Liberally.

Arrangements have been made with Boston bankers, it is reported, by which C. H. Wills & Company, maker of the Wills Sainte Claire car, will be provided with a revolving credit of $6,900,000, which will run until July, 1923. This will provide enough working capital for all needs, and relieve the company of all financial worries for more than a year at least.

* * *

Auburn's Service Manager.

E. A. Johnson, recently appointed service manager of Auburn Automobile Co., Auburn, Ind., is deeply experienced in relations between manufacturer, dealer and car owner; knows the importance of makers being in close touch with owners so they will get most satisfaction out of their cars; realizes its benefit to all concerned.

* * *

Every day is a better day, now.

General Motors Office Pile.

Completing the great General Motors office building in Detroit has begun, with several hundred workmen. The building was started three years ago, and will be finished by early summer. It is announced the fourteenth floor will contain the executive offices. Pierre S. duPont and all members of the executive committee will have their offices in Detroit. At present 13 floors in the east half have been finished. Much space has been rented to outside concerns, and demand for the remainder is insistent.

Demand for rental of the exposition hall, with 30,000 square feet of floor space, is forcing rush work on that. The restaurant on the ground floor will seat 1200. In addition to the exposition hall there is a large auditorium.

When fully occupied the building will house about 6000 workers and will support a population equal to that of Pontiac. On the ground floor are six big display rooms in which will be shown finished products of the company. All sorts of stores open on the lobby. The corridors total four miles and are of marble. There are 5148 windows, containing 7¼ acres of glass and there are 7916 electric lighting fixtures. The total floor area is 30 acres. Of this 1,054,685 square feet will be rented.

* * *

Kendell's Rapid Growth.

Kendell Engineering Co., Fort Wayne, Ind., manufacturing Kendell piston rings exclusively, has announced definite plans of expansion, having incorporated under Indiana laws as Kendell Engineering Corp.

Construction of a plant is to begin at once, as the extensive national business warrants immediate production. Several manufacturers, it is stated, are contemplating using Kendell piston rings as standard.

There are no changes in officials. C. A. Kendell remains president and engineer, Robert L. Kendell vice president and sales director, and M. W. Cartwright secretary and treasurer.

* * *

Page Heads American Motors Corp.

Carl H. Page will head the reorganized American Motors Corp., Plainfield, N. J., which has taken over the assets of the original company, recently acquired from the receivers by a syndicate of stockholders. Mr. Page takes charge immediately, with headquarters at the plant.

* * *

Clutch Face and Brake Block Case.

A decision by the Examiner of Interferences of the United States Patent Office is said to declare Thomas O. Werner invented clutch faces and brake blocks made of asbestos fiber. Mr. Werner is awarded priority of invention on these appliances. He has assigned his patent rights to the Multibestos Company, Walpole, Mass., and by these proceedings, it is stated, the patents of Sumner Simpson, under which the Raybestos Co., Bridgeport, Conn., has been operating, are declared to be invalid.

Clutch faces of the type invented by Mr. Werner are being used by many of the larger manufacturers of automobiles.

* * *

Shuler Axle Plans.

Shuler Axle Co., Inc., Louisville, has acquired the assets of Shuler Axle Mfg. Co., and is already producing front axles for motor trucks, trailers, tractors, motor buses, etc.

W. F. Robertson, of Cincinnati, president of Robertson Steel & Iron Co., is president of the Shuler Co. W. H. May, of Louisville, is secretary and treasurer of the new organization. The company is beginning with a paid up capital stock of $150,000, which assures ample cash resources for immediate and continuous development. The line of front axles which was made by the former company will be continued, and plans have been completed for additions to the line.

GEORGE C. FRIES.

Mr. Fries has bought space in publications 20 years. The last ten years he was with Power, Alexander & Jenkins, Detroit. Now he is manager of Campbell-Ewald Co.'s publication department, in the Detroit office.

Frank A. Shuler, who is a familiar figure in the automotive world, will continue as general manager. Harry W. Helms remains as sales manager. Other department heads who have been with the Shuler organization since its inception will continue.

* * *

Wants Pay for Willys Plant Work.

Paul L. Batty, who made his contract personally with John N. Willys, president of Willys Corp., for designing and supervising construction of the huge plant at Elizabeth, N. J., has filed a mechanic's lien for $42,379.36 for his work.

* * *

Keep oil in, not on the motor.

Taber's Scope Enlarged.

Effective April 1, Motor Wheel Corp., Lansing, will have a Detroit office , with M. W. Taber, special representative, in charge. It will be at 601-602 Capitol Theatre Building, on Madison Ave. R. I. Miner, in charge of the Pressed Steel Division activities in Detroit, will also occupy it.

Mr. Taber's activities for the time being will be confined to the steel wheel departments, including the sale of both Gier Tuarc and Gier-Lewis steel wheels. He has been handling Motor Wheel Corp. steel wheel activities more than a year, as a distributor in the Michigan territory. By this new move he will handle both the manufacturers' and distributors' end of the work.

Mr. Taber's experience in the steel wheel industry dates back over four years. Previously he had been for six years a plant engineer with Packard. He is president of the Detroit Engineering Society and a member of the American Society of Mechanical Engineers.

* * *

Riddle Heads Ceramic Society.

Frank H. Riddle, Detroit, ceramic engineer for Champion Porcelain Co., Detroit, a branch of Champion Spark Plug Co., Toledo, has been elected president of American Ceramic Society. Mr. Riddle, during the war was on the technical staff of the United States Bureau of Standards. Much of the credit for developing the spark plug for aviation is given him.

* * *

Age 84, Tool Maker 70 Years.

Alonzo Sharp is the industrial patriarch of Flint, Mich. He is 84 years of age and has been active in tool making 70 years. He is employed by Buick, and has worked every day the last 12 years. He is afraid to retire as he says it is then that a man goes back. Mr. Sharp believes that he has another 20 years of active service before him, and that work is the cure for all ills, both of the body and the mind, and that it will help some in financial maladies as well.

* * *

Celebration at Cadillac Plant.

More than 10,000 persons attended the celebration and flag raising day at the Cadillac Motor Car Co. plant in Detroit recently in honor of the 264th birthday of Antoine de la Mothe Cadillac, founder of Detroit. A parade of Cadillac cars preceded the flag raising. These cars dated back to 1902 and were driven by the oldest employes of the plant. The 1902 model has been driven one million miles and has worn out six speedometers.

* * *

May Buy Torbensen Axle Co.

Plans are under way by which Cleveland interests are expected to purchase Torbensen Axle Co., which now is controlled by Republic Motor Truck Co. This transaction, it is understood, is to be followed by a financing program calculated to strengthen the position of the company considerably.

Ford Items.

Henry Ford, through Government agencies, will announce on June 1 the opening of a hydro-electric power plant on the Hudson River, opposite Troy, N. Y. It is estimated the plant will develop 8000 horsepower.

—

Reorganization of factory facilities at the Lincoln plant to meet Ford ideas on efficiency are being carried through rapidly, for increased production. The work is under direction of Charles E. Sorensen, director of all Ford manufacturing operations, and P. E. Martin, said all Ford executive offices may be housed in the Lincoln office building, because of its position midway between the Highland Park and River Rouge plants.

—

Wallace R. Campbell has been named first vice president and treasurer of Ford Motor Co. of Canada, Ltd., to succeed the late Gordon McGregor. Mr. Campbell formerly was secretary, assistant treasurer and assistant general manager of the company. Henry Ford is president. Mrs. McGregor will succeed the late Mr. McGregor as director for his unexpired term.

—

Charles C. Hildebrand, whom the writer taught to ride a high wheel in St. Louis in the '80s, has resigned as manager of the Ford branch at Minneapolis, after having been 10 years with Ford. He was with the old Chalmers organization before that, and for eight years was with the early Stevens-Duryea, becoming its sales manager. Mr. Hildebrand plans to take an extended vacation, touring around the country, and will make his headquarters in Hollywood, Calif., in future.

* * *

Haynes Production Jumps.

An increase in production of 200 per cent since January 1, and an increase of 25 per cent in March over March, 1921, is the record of Haynes Automobile Company, Kokomo, Ind. Demand for the new 55 and 75 models has stepped up production weekly since the beginning of the year. Haynes dealers are sending in hundreds of orders for immediate car shipments from practically every section of the country.

This looks like the biggest year in the history of the company.

* * *

Multibestos Election.

At the annual meeting of the stockholders of the Multibestos Co., Walpole, Mass., makers of Multibestos brake lining and clutch linings, C. W. Bunker was elected treasurer. The officers and executives now are: Stoughton Bell, president; C. W. Bunker, treasurer and assistant to president; T. J. Daley, secretary; T. H. Bateson, superintendent; E. C. Miner, assistant sales manager; J. Posternock, purchasing agent.

* * *

To Direct Studebaker Ads.

Joseph H. Neebe, who has been identified with advertising and publishing interests for years, has been appointed vice president of Grandin-Dorrance-Sullivan, Inc., in charge of a service branch in South Bend, Ind., from which the advertising of Studebaker Corp. will be directed. Mr. Neebe for five years was vice president of Charles Daniel Frey Co., prior to which he was production manager of Lord & Thomas, Chicago.

* * *

Liberty Sales Continue to Climb.

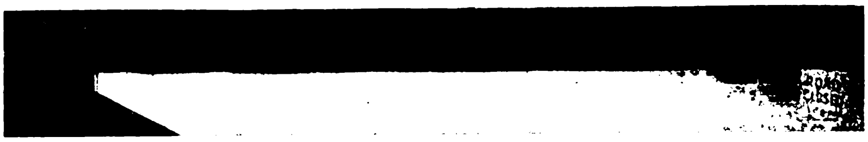
On March 1 it was reported that Liberty Motor Car Co., Detroit, had orders on hand, for immediate shipment, 60 days ahead of production schedule. Three weeks later the company stated that, while production has steadily increased and in April there will be at least a 60 per cent gain over March in cars built, there are now enough orders on hand to keep the factory busy for an even longer period. Still further increases in the manufacturing program are contemplated.

* * *

April 18 has been set by Federal court for the sale of the assets of the Allen Motor Co., Columbus, O., at auction. The property consists of a plant at Columbus and one at Bucyrus, O., much material, some finished cars.

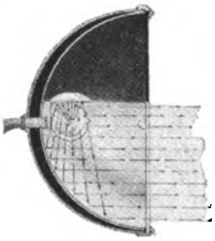
A Flare of Dim, Ineffective Light in All Directions, Giving No Warning of Danger Ahead

Diverting Wasted Upper Light Rays to the Road Ahead. A Considerable Increase in Light



A Perfect, White Light, Increased 60 to 80%, Concentrated on the Road Nearly Double Usual Distance and Width, Eliminating Glare

K-S *Anti-Glare* Light Booster



WILL INCREASE YOUR ROAD LIGHT 60% TO 80%

The upward light rays are trapped and utilized in the bottom of the reflector.

Eliminate the Glare. The upward rays being shut off, there is no glare.

Easily Attached to Any Head Light. No tools required.

Can be Used With Plain Glass Lens. Will also increase light if used with patented lens.

Has No Contact With Light Bulb. Ample air space provided to prevent heating bulb.

Approved by Motor Vehicle Departments

$1.25 per set

Ask Your Dealer or Write Direct to

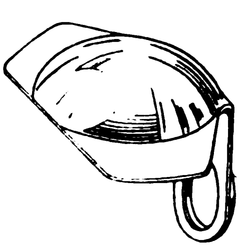
K-S MANUFACTURING CO.

409-411 W. Pico Street, Los Angeles, Cal.

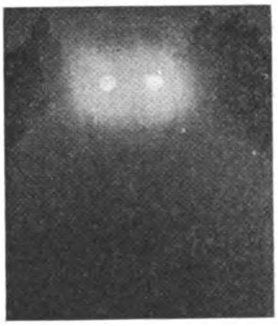
Distributors for Pacific Coast

U. S. MANUFACTURERS SALES CO.

Los Angeles, Cal. Portland, Ore.



Patented Lens Alone



Ineffective Light Spread in all Directions. 50% of your light wasted

Patented Lens with Booster

Light Increased and Concentrated on the road. Length of Rays Increased

Plain Lens with Booster

Perfect Light. None Wasted. Rays Extended nearly double usual length

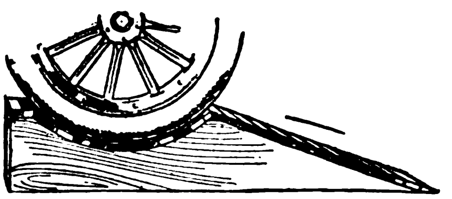
Shop Practice Hints

TO ADJUST BRAKES.

There are many ways to adjust brakes, but the safest is to jack up both rear wheels and adjust both sides of each band till it clears the drum by 1-32 inch or perhaps a little more, care being taken to see if the resulting adjustment causes dragging. This can be told by rotating the wheel.

REPAIR PIT SUBSTITUTE.

As it is very tiresome to work under a car when one has to crawl under, the trouble usually is overcome by means of a pit or hole in the floor, over which the car may be run for working purposes. These pits are dangerous on account of filling with gas and fumes which are ignited easily. A very good and inexpensive substitute for a pit can be made very easily by taking lumber and building an incline upon which one can drive the car. On the top of this incline have a hollow place in which the wheels will rest, preventing the car from rolling either forward or backward. This leaves plenty of air space under the car, which prevents gases from gathering.



REPAIR PIT SUBSTITUTE.

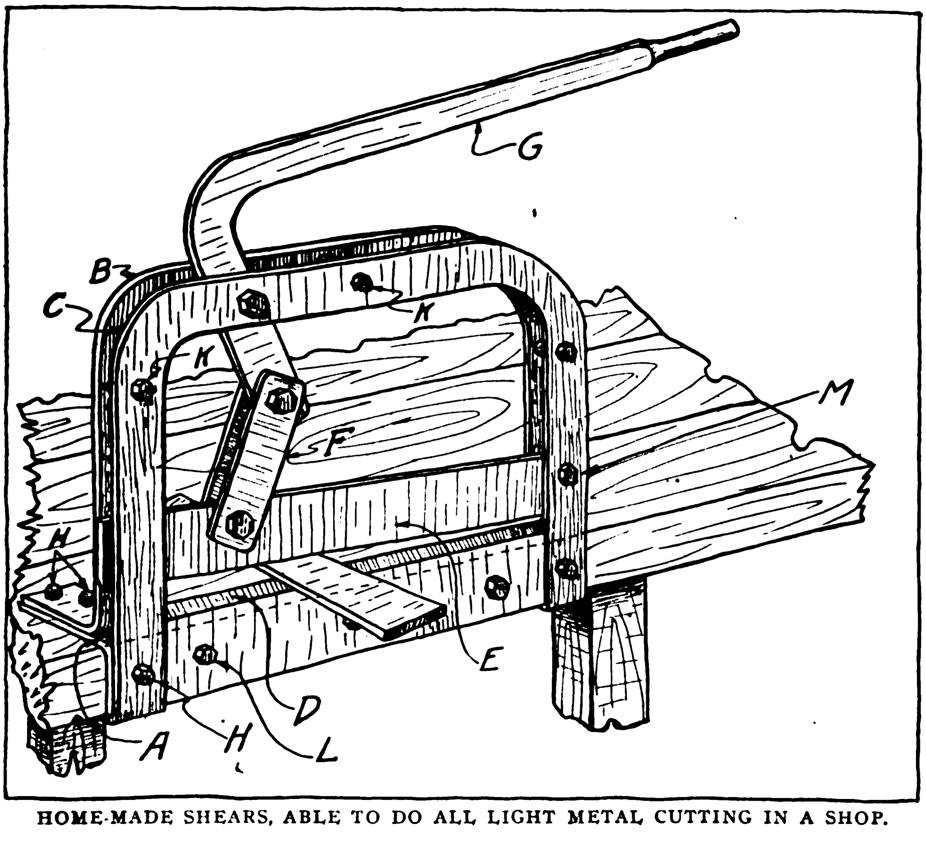
The incline should be about 10 feet long, with a gradual slope up which the car can easily be driven. It should be about 3 feet high at the top and about 2 feet wide. It should be made of 2 inch lumber, to be strong enough to support a car of any size.

This arrangement is very handy and it will eliminate lots of work when it is necessary to get under a car. The accompanying illustration shows the inclined approach, the top and the depressions for the wheels.

SHOP SHEARS.

Shears for cutting sheet metal and light bars will be found a great convenience about any repair shop and will relieve the hacksaw and bull cutters of much of the heavier work which they are now improperly called upon to perform. The accompanying drawing shows shears which can be made up by the force of any good repair shop and which can be depended upon to perform all of the light metal cutting which may arise.

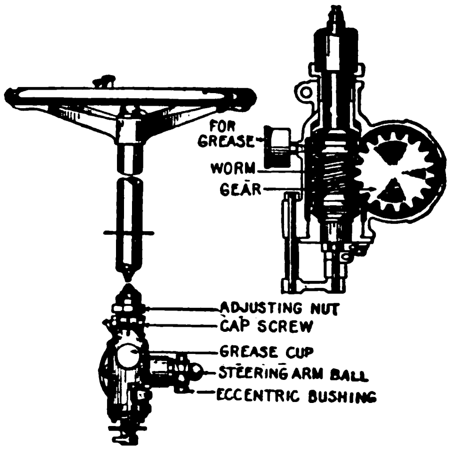
In the sketch the frame work consists of two ½x2 inch straps, B and C, bent to the form shown and assembled with an angle iron, A, so they are all secured together, and to the bench, by means of bolts H. Straps B and C are stiffened and held at the proper spacing by the spacing bolts K. The lower cutter D is secured to the angle iron A by the bolts L, so that its cutting edge is held in line with the guide surface of strap C. The cutter E is hinged on the steel pin M and works between the straps B and C so that its front or cutting edge is at all times held against the guide surface of strap C. The cutter E is forced down by the toggle arrangement shown consisting of a pair of straps F and the handle G, all of which are assembled with steel pins. With this arrangement a comparatively light pull on the handle G will result in tremendout cutting pressure between the shear blades.



HOME-MADE SHEARS, ABLE TO DO ALL LIGHT METAL CUTTING IN A SHOP.

ADJUSTING STEERING GEARS.

With continued use the steering gear of any car may indicate more or less wear by loosening of the steering wheel. To correct this, first jack up the front of the car so that the steering apparatus may be moved freely. Then loosen the clamping bolt. Now turn the adjusting nut to the right until the steering wheel no longer has any lost motion. Next turn the steering wheel hard around and adjust the worm by turning the eccentric bushing. Make this adjustment with the steering wheel turned to the extreme right and left because the steering wheel is bound to wear most in the center, as most of the car's travel is straight ahead.



ADJUSTING STEERING GEAR.

After the bushing has been adjusted repeatedly, if the play continues it will be necessary to remove the ball arm by first removing the clamping bolt. Then turn the steering wheel one and one half turns around. This will present a new surface (there are about four surfaces) to the worm. Make adjustment as already indicated, of course replacing the ball arm first. Be careful to have everything tight after adjustments have been made.

RUSTY RIM REMEDY.

Whether the tires be clincher or other type, the rims should be kept clean. It is quite possible for rust to gather on a neglected rim, very quickly, and a sharp piece may pierce the inner tube. Even if this does not occur the rust will tend to chafe the tube and a premature puncture will result. If the rust is thick it may be loosened by pounding the edge of the rim with a tire iron, being careful not to strike the inside of the rim. Next, scrape the rim with some sharp tool to remove rust, and then go over rim with emery cloth until it is perfectly clean. After the final cleaning with emery cloth the rim should be given a coat of Japan enamel. Another coat should be applied after 5 to 6 hours, and when this second coat is thoroughly dry, replace the tires. The rims will remain clean and smooth for a long time without further attention. A protective coating on rims tends greatly to preserve the beading on the outer cover.

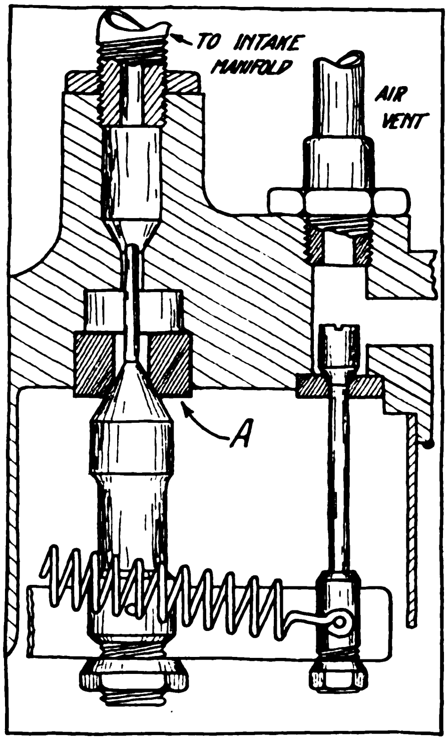
Panama has more automobiles than all the rest of Central America.

Motorists' Letter-Box

LOOSE VALVE SEAT.

Editor Motor West: I have had considerable annoying trouble with my vacuum tank. Some time ago, on the road, my motor suddenly stopped. Investigation showed plenty of gasoline, so I naturally supposed the difficulty was an obstruction in the piping or carburetor. At a garage the connection between the vacuum tank and carburetor was removed and all found clear. When replaced the motor operated perfectly. Several days later my experience was repeated. This time, the garage work extended to examination and cleaning of carburetor float mechanism, strainer, etc. Again the car operated satisfactorily a few days. Another occurrence of the same kind resulted in disconnecting the vacuum pipe to the intake manifold, and the car operated normally, while this pipe was disconnected. The vacuum tank mechanism was then carefully gone over and replaced, with satisfactory results for a few days. I encountered the same trouble again and immediately disconnected the vacuum pipe and returned some 15 miles to the garage, stopping now and then to reconnect the vacuum pipe long enough to fill it with gasoline. At each filling the motor choked as soon as the tank was full. I rolled in on the garage floor full of wrath. The foreman and I started the motor, connected the vacuum pipe and all tests failed to disclose any trouble. Examination of the mechanism was likewise fruitless. Can you suggest the cause of this trouble?—S. B. M., Pocatello, Idaho.

Assuming the vacuum tank mechanism was examined and correctly repaired and replaced, it is evident your trouble is due to failure of the valve controlling the opening to the intake manifold, to properly close the opening. It is not infrequently found that the little ferrule which is pressed into the cover and forms the seat for this valve may become loose and drop from its place in the cover. Then it usually binds between the valve and the cover and prevents closing the opening. It is quite probable that in your case this ferrule has been dropped down and at times has been reseated by the action of the mechanism so that the car would again work properly. It is suggested that you carefully examine this ferrule, which is indicated at A in the sketch, and insure its tightness in the cover by punch pricking it around the edge in several places.



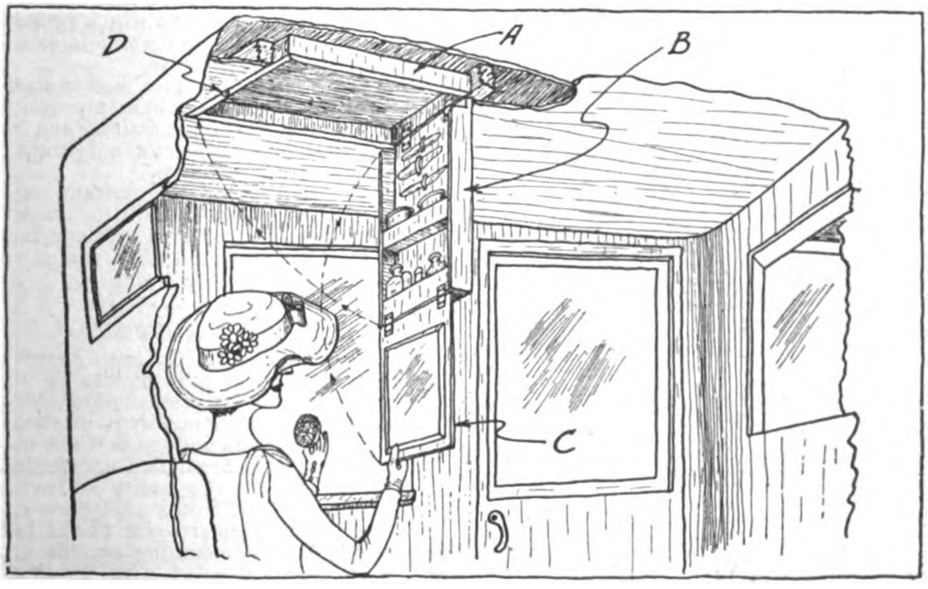
LOOSE VALVE SEAT AFFECTS MOTOR.

SEDAN VANITY CABINET.

Editor Motor West: During my spare time as cashier in a garage I enjoy reading Motor West and am especially interested in the new accessories and the ideas in your Letter Box and Shop Practice section. I feel, however, that the needs and preferences of the ladies are entirely overlooked. While it is true that we are less interested in mechanisms and things of that nature, still it is just as true that we are most interested in the little conveniences. I hope you will give space occasionally to such things.—Miss N. T. M., San Francisco, Cal.

Perhaps the vanity cabinet shown in the illustration will meet with your approval, both as a reader and a user. The cabinet as shown, is concealed in the top of a closed car, though its shallow depth permits it to be installed exposed or even to be installed in open cars whose tops are seldom lowered. The cabinet consists of an outer box, A, permanently fastened bottom up within the top. To the front lower edge of this is hinged a second box, B, in which are provided the necessary toilet articles. Box B has a cover, C, hinged as shown and having, mounted on the inside, a good sized mirror. When closed the mirror lies face down upon the top of box B, so that it is not liable to breakage from the articles stowed in the box.

When closed all parts fit neatly within the top lining and the exposed under side of the box may be covered with the top lining material, or be decorated to suit the individual's taste. To open, the button D is pushed to release the latch, which permits Box B to swing downward, after which the cover C is turned down, bringing the mirror to the proper height and exposing the toilet articles within easy reach of the user. It is believed this arrangement will provide the "dernier mot" in convenience for ladies en route to social functions, etc., where a last touch is so essential.



INGENIOUS VANITY CABINET IDEA FOR USE IN A SEDAN.

SQUEAKY SPRING REMEDY.

Editor Motor West: I have a squeak in my car which I can not locate. It seems to be every place and it is very loud. I have hunted all around and oiled and tightened everything and I am very particular to keep the hard oil cups on the spring hangers well filled. The grease passes through all the spring bolts freely. The car has been in this condition several months. The garage men tell me to tighten all loose parts and use plenty of oil and grease, which I have done without results, and I admit it's got my goat.—R. A. M., Flagstaff, Ariz.

If you tighten every part and use oil, and see that this oil gets into the parts, you won't have any squeaks. Your trouble is that you have used oil but not in the right place, or it did not get into the part. The spring leaves have no oil holes or special place for oiling, and they become dry and rusty. Beyond any doubt this is where you will find your trouble.

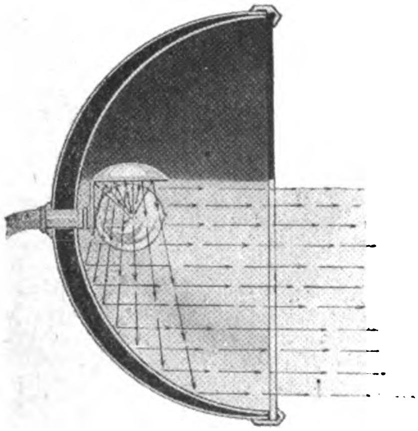
Jack your car up enough to relieve all weight on the springs and then take some kerosene and a brush and go over your springs with this, to wash out all dirt and gum from old grease. Then use light cylinder oil or spring oil and run the oil into the springs from both edges. Let it set a short time to allow oil to penetrate, and oil it again. Your squeaks will stop after this treatment. Save your old oil that you drain out of the crankcase. It is very good for oiling springs. Paint your springs with this oil about every two weeks—an old paint brush will do—and you will have no further trouble.

New Things in the Accessories Field

K-S LIGHT BOOSTER.

The K-S Anti-Glare Light Booster is an inexpensive headlight accessory for securing proper road illumination within the limits of state laws. It is designed to be easily attached to any headlight bulb socket. It not only traps overhead rays, the trouble breeders in night driving, but also reflects these rays to the bottom of reflector, thus utilizing all the candlepower developed by the bulb for useful road lighting.

State departments have approved the use of plain glass lenses in connection with the Booster, but as the road light also is increased when used with any type of lens, many drivers are installing this device in conjunction with patented lenses, according to the manufacturers. When lens breakage comes, replacement is made with plain glass at small cost. It has no contact with the light bulb and is designed to provide ample air space between bulb and the Booster, thus eliminating any overheating of bulb.



K-S LIGHT BOOSTER.

A large number of taxicab companies and fleet owners, as well as private cars, now are users. The manufacturer is the K-S Mfg. Co., 409-411 West Pico St., Los Angeles. U. S. Manufacturer's Sales Co., Los Angeles and Portland, is distributor for the Pacific Coast. Price $1.25 a pair.

BAUSCH & LOMB LENS.

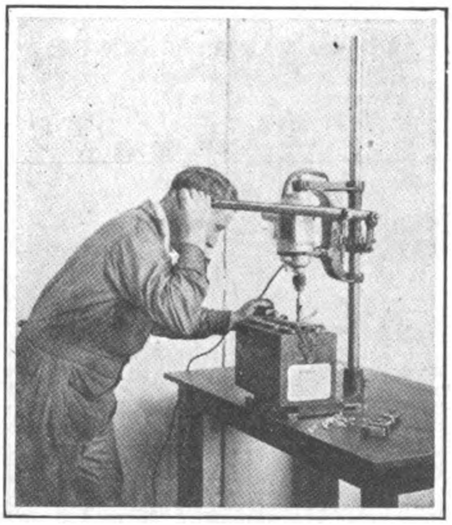
The Bausch & Lomb automobile lens is the product of the manufacturers' long experience as designers of all types of high grade lens and optical instruments. It throws a brilliant band of light to illuminate a lateral area of 50 feet at distance of 100 feet, while objects are plainly visible up to 500 feet. Glare, it is said, is positively eliminated, and to approaching drivers the lamps appear as though dimmed. It is said to be the only lens combining in its design a row of vertical cylinders with single, unbroken, vertical prism. Two systems of cylinders on front and rear of lens spread all the light laterally, and the vertical prism, with base down, keeps light at the legal level. There are 14 sizes, ranging from 8 inch to 11 inch diameter, and priced at from $4 to $6. Distributed on the Coast by Bausch & Lomb Optical Co. of California, 154 Sutter St., San Francisco.

OILDAG ON COAST.

Oildag, a new lubricant to the Coast territory, has been placed in distribution west of the Rockies by Acheson Oildag Co., New York City. Fred Ward & Son, San Francisco, are distributors in this region for Oildag, a compound of deflocculated graphite and oil. In a remarkable demonstration of its lubricating properties a car at Jacksonville, Fla., had its lubricating system and crank case drained of all oil, was operated with Oildag long enough to secure a graphoid surface on cylinder walls and bearings, and finally was driven 15 miles without injury to the engine, with no other lubricant added.

BLACK & DECKER STAND.

The Black & Decker battery drill stand operates on alternating or direct current at will, and is a special outfit for drilling out storage battery terminals. The standard Black & Decker ⅜ inch portable electric drill can be attached to stand in a few seconds, giving a capacity up to ¾ inch in lead, and ⅜ inch in steel, and up to 9/16 inch in hardwood, although the outfit is intended principally for battery work. Complete outfit consists of battery drill stand with one Black & Decker drill, and two special lead boring bits, ⅝ inch and ¾ inch diameter, and shanks to fit chuck on the ⅜ inch drill. Price $135. Manufactured by Black & Decker Mfg. Co., Baltimore.



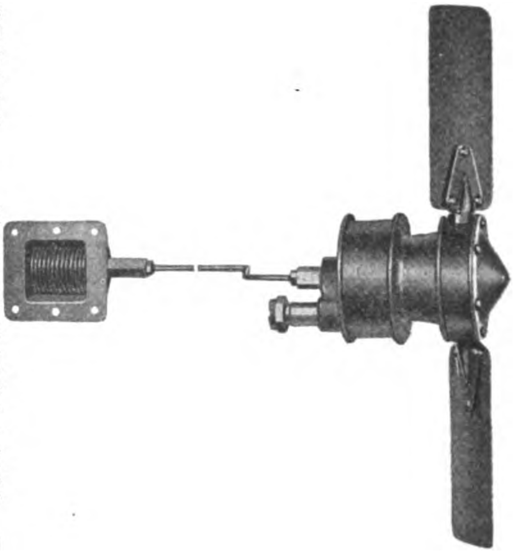
BLACK & DECKER STAND.

Like real woods? Olympic Peninsula, Washington, has the thickest ones in the United States.

THERMATIC FAN.

An automobile fan, with blades controlled by a thermostat attached to the side wall of the cylinder or to the upper radiator hose connection, is manufactured by General Necessities Co., 3033 Center St., Milwaukee.

When engine temperature falls below the point of proper operating efficiency, 170 to 180 degrees, thermostat contracts, giving fan blades a pitch which decreases flow of outside air, or in conditions of extreme cold, re-uses blade so warmer air from under hood is projected out through radiator, heating it and restoring correct engine temperature.



THE THERMATIC FAN.

When engine temperature rises above efficiency mark, thermostat expands, setting fan blades at an angle which permits free ingress of air to cool water in radiator and reduce temperature.

This fan is claimed to give instant starting of engine in cold weather, prevention of spitting, backfiring, missing, and to eliminate frequent carburetor adjustments and reduce carbon deposits.

While designed for thermostatic control, the same fan can be built for manual operation from the dash. Thermatic fans will be built for all makes of cars in either two, three or four blade styles.

U. S. TIRE BUFFER.

U. S. Electrical Mfg. Co., Los Angeles, has manufactured electric motors on the Coast since 1906. Its products are giving dependable service in hundreds of shops, factories and vulcanizing plants where machines of rugged construction are needed. The U. S. electric tire buffer is having great success. Its motor parts are entirely enclosed; standard size liberal ball bearings in special mounting exclude grit and dust; and enameled wire windings, specially treated, assure long service.

THE reductions that have brought the price of Kellys down to a competitive basis were made possible simply by greatly increased production in the most modern and most efficiently equipped tire plant in America. The quality of Kelly products is better than ever, but now *it costs no more to buy a Kelly.*

The public is going to buy a lot of Kellys this year. Are you going to sell some of them?

Kelly-Springfield Tire Co.
GENERAL SALES DEPARTMENT
1710 Broadway, New York

LEATHER ZAPON CLOTH

The upholstery that is dependable

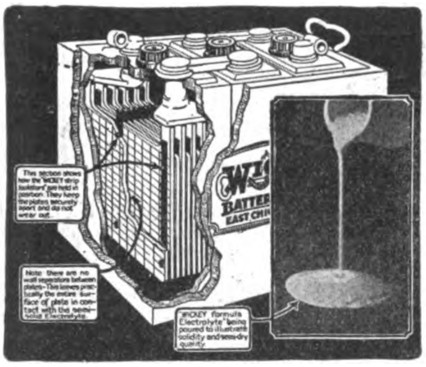
Send for samples showing the ZAPON brands—Muleskin, Broncho and Mustang—that are made especially for fine automobile upholstery and California Top Work

ZAPON LEATHER CLOTH COMPANY
200 Fifth Ave., New York
Branches: Chicago, Detroit, Los Angeles, St. Louis

WICKEY BATTERY.

Arrangements to distribute on a national scale a new type of storage battery have been made by Wickey Battery Co., East Chicago, Ind., manufacturer. This battery has been manufactured for the past 3 years, and more than 3000 are in use today. The principal arguments for it are that it does not require the regular care and attention other batteries must have; that it is practically trouble-proof, and non-freezable; that it operates efficiently without water for from 3 to 6 months. It is guaranteed for 3 years' service.

It is called a semi-dry battery. The usual acid-water electrolyte is displaced by a semi-solid mixture, the Wickey formula electrolyte compound. There are no separators, but three strip isolators, which are narrow strips of hard rubber, one at each end and one in the middle, fixed permanently between plates. Practically all space between plates is occupied by the non-corrosive Wickey electrolyte compound. This does not evaporate, and evaporation of water, added at long intervals, hardly is noticeable. In many severe and unusual tests the Wickey battery has been found to function perfectly while frozen in a cake of solid ice, or while totally immersed in a tub of water.

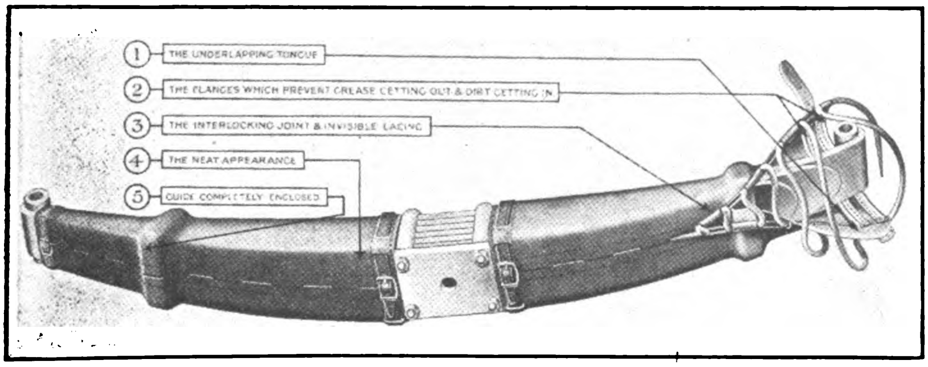

This section shows how the "WICKEY strip isolators" are held in position. They keep the plates securely apart and do not wear out.
Note: there are no wall separators between plates—This leaves practically the entire surface of plate in contact with the semi-solid Electrolyte
"WICKEY formula Electrolyte" being poured to illustrate solidity and semi-dry quality.
WICKEY BATTERY EAST CHI

WICKEY NEW TYPE STORAGE BATTERY.

The Wickey factory is now arranging dealer territories for national distribution.

WEFCO SPRING COVERS.

Wefco spring covers are of leather, and fit tightly about the car springs after a covering of lubricating grease has been applied to the leaves. They are hand sewed with a special needle, supplied by the manufacturer, Wefco Co., 154 Nassau St, New York City, and need not again be removed, since the leather possesses natural grease-retaining qualities. These covers protect against rust, shut out dust, and make springs more resilient, efficient and longer lived. Fitting snugly, they are neat in appearance. In Europe Wefco covers have been notably successful. At the Olympia Show in London, last November, 67 cars exhibited had them installed One European maker alone ordered 102,000 covers.


1 THE UNDERLAPPING TONGUE
2 THE FLANGES WHICH PREVENT GREASE GETTING OUT & DIRT GETTING IN
3 THE INTERLOCKING JOINT & INVISIBLE LACING
4 THE NEAT APPEARANCE
5 GUIDE COMPLETELY ENCLOSED

POINTS OF SUPERIORITY CLAIMED FOR WEFCO SPRING COVERS.

TWO WALLER PRODUCTS.

Waller Mfg. Co, Oelwein, Ia., manufactures the Universal heater cutout and the Waller connecting rod aligning jig.

The cutout is an all-year-round accessory, used in summer as an ordinary cutout, and in the winter in connection with a heater. The enclosed bottom avoids the trouble of having dirt and mud lodge under the flap, and hold the valve so it can be neither opened nor closed. Price $2.75 to $4.25.

The aligning jig is an essential tool for the repair shop. It can be used to straighten any rod by using different size bushings, without removing it from jig, a great time and labor saving improvement. Jig sells at $12.50, bushings at $1 each. According to J. H. Maloney, manager, the company has a very attractive proposition for jobbers.

SURE GET 'EM MAGNET.

The Sure Get 'Em Magnet is manufactured as a friend of the repairman who must grope into engine, clutch, transmission, differential or oil pan for a dropped nut, bolt or tool. It puts in new starter chains without taking off radiator and case, puts back lock pins without dropping them, in half the time taken by fingers and pliers, lifts out valves in grinding, tells by inserting it into the grease if gears are chipping, discovers if there is steel dust in transmission or differential, etc. It works by snapping on battery terminals, or line, and pressing switch button to drop release switch, will lift from 1 to 2 pounds, working in oil, grease, or water, and pays for itself in a week, according to R. H. & H. C. Gray Co., 1315-19 Fifth Ave., Seattle. Price $5.

IMPROVED AC FORD PLUG.

A greatly improved spark plug for Ford engines is offered by AC Spark Plug Co., Flint, Mich.—the AC 1075 special. The porcelain is removable. It is girdled by six knife-edge ridges, which heat and burn off soot or carbon as fast as it forms, preventing "shorts." The exposed end of the porcelain is short and stocky, to protect it against accident. Side electrode is rugged and forms a natural oil drain.

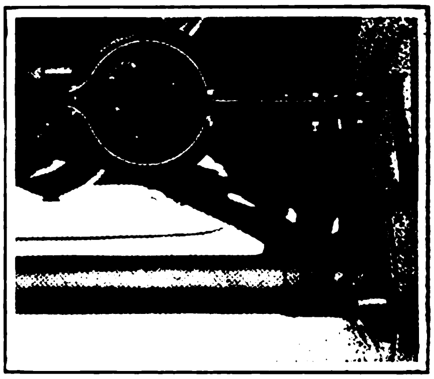
The plug is assembled with only one gasket, assuring compression tight union at all times. The troublesome nut—often dropped into open cylinders or the engine pan—is replaced in the AC 1075 by a spring clip that holds the regular Ford terminal securely in place. The terminal can be removed by a slight pull and can be replaced quickly, a feature appreciated by both mechanics and car owners.

FARLEY'S MOONLIGHT.

H. W. Farley, 127 East Ave. 41, Los Angeles, has invented and perfected a new automobile headlight lens after two years of experimentation, to be known as Farley's Moonlight. He claims it meets the three vital essentials of road illumination—perfect illumination for 500 feet ahead; absolutely no glare on the left of the driver, but light 30 to 40 inches above road for from 400 to 500 feet ahead; and enough light to show all objects distinctly 200 feet or more away. Mr. Farley has a patent pending, and will start quantity production this summer.

BLACKMORE SHOCK PREVENTER.

The Blackmore shock and roll preventer is a new, improved device for Fords, announced by Charles C. Blackmore Co., Dayton, O. It is said to work on an entirely new principle, increasing the friction of the rotating arm, which prevents all unnecessary spring-throw by slowing down gradually the forces of compression and rebound. The firmer, wider spread of base on which the body rests makes it ride with unusual ease. The new device can be installed without any changes, easily and quickly, to the present bolts on frame and axle, both front and rear. Price $28 a set of four.



BLACKMORE SHOCK PREVENTER.

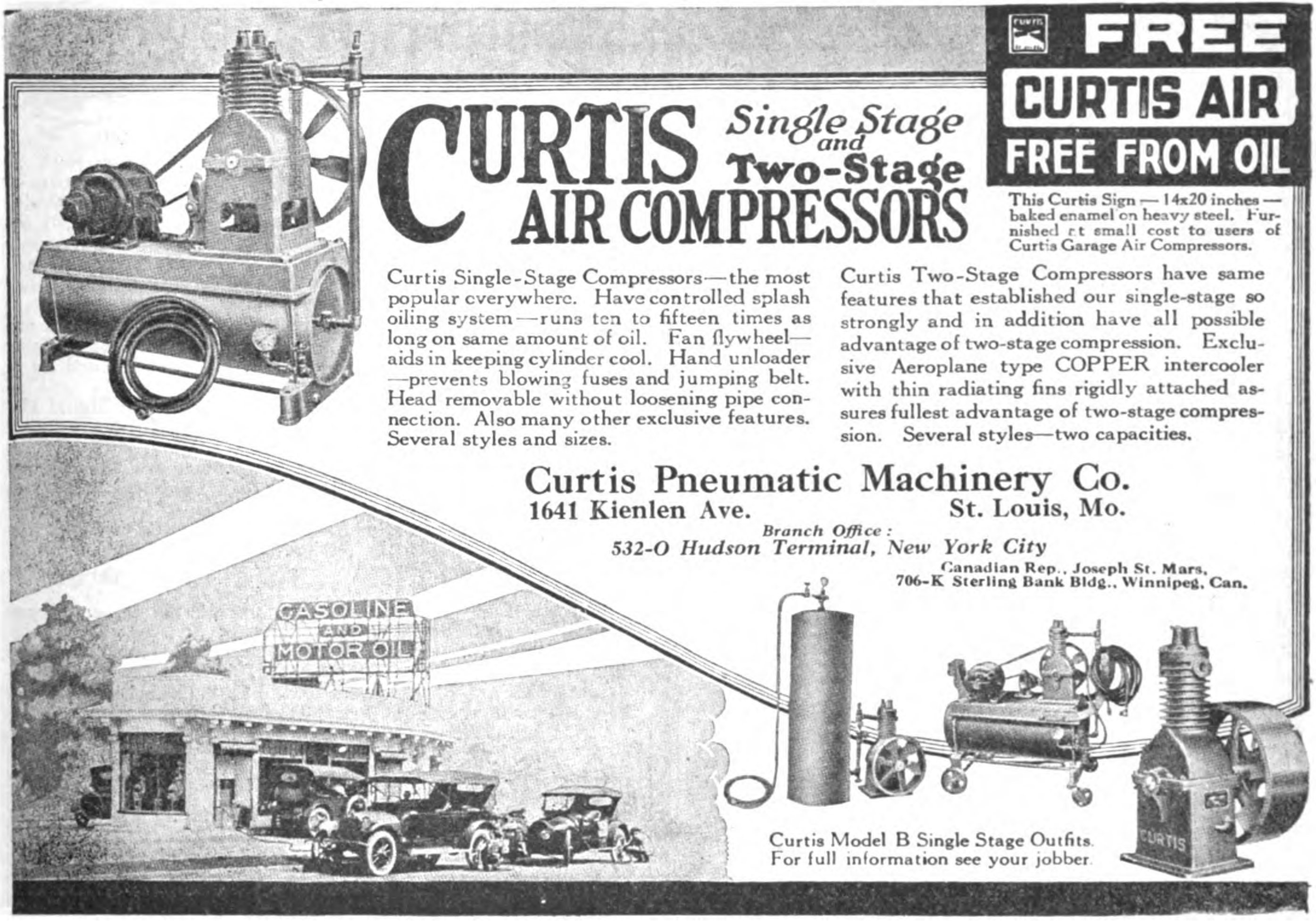
AUTOMATIC CLEANER.

J. D. Porter, of long standing in the automotive field, is at the head of Motor Car Specialties Co, Boston, which will market the Demand automatic windshield cleaner, invented by Joe Downey, a cycle racing star of the old days and a star aviator some years ago. This cleaner works automatically from the exhaust and sweeps backward and forward across the entire upper glass of the shield.

BEEDEE SERVICE LIST.

Beedee Distributing Service, 613 West Pico St., Los Angeles, has issued a new price list, effective March 1. The company provides high-grade replacement parts for service stations and garages, and quotes on rear axle, master ring and pinion gears, passenger car axles, truck axle shafts, propeller shafts, and pinion shafts for practically every car and truck manufactured.

'Better the whistle that blows when the gas gets low, than the whistle—if nothing worse—one emits when he is out nowheres and the gas all gone.



FREE
CURTIS AIR
FREE FROM OIL

This Curtis Sign — 14x20 inches — baked enamel on heavy steel. Furnished at small cost to users of Curtis Garage Air Compressors.

CURTIS Single Stage and Two-Stage AIR COMPRESSORS

Curtis Single-Stage Compressors—the most popular everywhere. Have controlled splash oiling system—runs ten to fifteen times as long on same amount of oil. Fan flywheel—aids in keeping cylinder cool. Hand unloader—prevents blowing fuses and jumping belt. Head removable without loosening pipe connection. Also many other exclusive features. Several styles and sizes.

Curtis Two-Stage Compressors have same features that established our single-stage so strongly and in addition have all possible advantage of two-stage compression. Exclusive Aeroplane type COPPER intercooler with thin radiating fins rigidly attached assures fullest advantage of two-stage compression. Several styles—two capacities.

Curtis Pneumatic Machinery Co.
1641 Kienlen Ave. St. Louis, Mo.
Branch Office:
532-O Hudson Terminal, New York City
Canadian Rep., Joseph St. Mars,
706-K Sterling Bank Bldg., Winnipeg, Can.

Curtis Model B Single Stage Outfits.
For full information see your jobber.

Use Motor West

❦

¶ Every Eastern automobile or accessory manufacturer can help his Pacific Coast representative increase his sales by a liberal use of the advertising columns of MOTOR WEST.

¶ Coast dealers and factory representatives should insist on the factory folks giving them the same advertising support in "The Motoring Authority of the Pacific Coast" as is accorded the Eastern and Middle Western dealers and representatives in the motor trade journals published and circulating almost exclusively in those sections. Otherwise the dealers and representatives here, who pay their proportionate share of the expense of advertising in the Eastern and Middle Western journals (and incidentally receiving very little benefit from it) are paying for something they do not get.

THINK IT OVER!

USE
EMSCO
BRAKE LINING

Instant response to pedal or emergency lever is what you have the right to expect. Failure may mean disaster.

Emsco Brake Lining gives unfailing, instant response. It costs no more. Simply say "Line my brakes with Emsco Brake Lining."

E. M. SMITH CO.
612-642 S. Clarence St.
Los Angeles, Calif.

THE SIGN

WE MAKE OLD ONES NEW
A B CO
CHICAGO ILL.

OF SERVICE

AHLBERG SERVICE

and

Ahlberg Ground Bearings

are the solution of your bearing troubles.

Ahlberg Ground Bearings

reduce upkeep costs—and

Ahlberg Service

on new bearings gives you what you want with a minimum of lost time.

Ahlberg Bearing Company

1708 S. Grand Ave., Los Angeles, Calif.

BRANCHES:

Atlanta, Ga.
Boston, Mass.
Brooklyn, N. Y.
Cincinnati, O.
Cleveland, O.
Detroit, Mich.
Kansas City, Mo.
Los Angeles, Cal.
Memphis, Tenn.
Milwaukee, Wis.
Minneapolis, Minn.
New Orleans
New York, N. Y.
Oakland, Calif.
Omaha, Neb.
Philadelphia, Pa.
Pittsburgh, Pa.
Portland, Ore.
Providence, R. I.
San Francisco, Cal.
Seattle, Wash.
St. Louis, Mo.
St. Paul, Minn.

Western Trade Notes

Los Angeles, Cal.—Coast Tire Sales Co., handling Coast tires, has been formed by F. R. Landis, L. McMichael, A. Kirkland and Clyde Shepardson, to handle Coast tires—Maskey's Exclusive Dodge Shop, specializing on Dodge Brothers car repairing, has opened in a new building, 1701 W. Pico St.—A. E. Reid has bought a half interest in Hollywood-Reo. Co., 5114 Hollywood Blvd., from Angus Potter.—Hartford Windshield Co. will erect a 2-story factory on South Los Angeles St. between 16th and 17th Sts.

Redondo Beach, Cal.—J. Holstede has opened a garage and repair business at Pacific Ave. and Camino Real St.—Moonstone Garage, 732 North Pacific Ave., has been opened by C. W. Modlin and C. H. Kelly.

Long Beach, Cal.—Ralph E. Downs has opened Signal Hill Oil Center Garage, State and Cherry Sts.—Lloyd Coseboom has bought the D. T. Thomas Service Station, 20th and Atlantic Sts.—Charles W. Crossman has opened a Marvel battery agency, placing it in charge of W. C. Loughery.—Erection of a $75,000 building for Glenn E. Thomas, of brick and terra cotta, at Anaheim and Elm Sts., will start in the fall.—Central Garage, Inc., has taken the Savage tire agency here.

Wilmington, Cal.—Harry Dourdway has bought Service Garage on Anaheim St. from B. S. Cheshire.

Ventura, Cal.—Jack Neville has moved his battery repair shop and Vesta agency to 432 California St.

Ojai, Cal.—Chester Johnson has opened Johnson Garage, Ojai Ave. and Montgomery St.

Santa Maria, Cal.—A. L. Popp and E. D. Rubel have opened Broadway Battery & Electrical Works.

San Luis Obispo, Cal.—Pacific Garage has been sold for $9000 by A. B. Small to J. B. Berkemeyer, whose son, Charles Berkemeyer, will be manager.

Hollister, Cal.—Sweet Service Co. on San Benito St. has opened with J. S. Pexiotto manager, handling general accessories and doing vulcanizing work.

Sunnyvale, Cal.—C. Redwine has opened Mount View Garage here, handling Ford cars, repair and storage service.

San Jose, Cal.—Peerless Specialty Co. has been formed with $10,000 capital by H. Johnson, F. Igel, Flora Pruess, F. Bloomingdale, to manufacture gasoline gauges.

Palo Alto, Cal.—E. R Collins has bought Times Garage, 234 Hamilton Ave., from A. T. Nielson.—J. Blackburn has bought his partner's interest in Palo Alto Garage, 440 Emerson St, and is now sole owner.

Newhall, Cal.—C. M. Cambridge has moved his vulcanizing shop to Woodward Garage, in a new building.

Palmdale, Cal.—C. W. Fischer will erect a concrete garage here with 10,000 square feet for his garage and repair business.

Taft, Cal.—George Sausman has sold his garage and welding shop on Kern St. to E. C. Wright.

Bonners Ferry, Ida.—Parks Highway Garage, I. B. Neill, manager, has taken the Ford agency.

St. Maries, Ida.—Sweeney & Neil have opened a Ford and Fordson agency.

Idaho Falls, Ida.—Idaho Motor Co., E. K. Mittry manager, is having its garage remodeled and enlarged to double present size

Montpelier, Ida.—Slater & Gantz Auto Repair Co. has been opened by Grover C. Slater and J. H. Gantz.

Boise, Ida.—John Kuehhorn, operating The Tire Hospital, has bought Parma Battery Station from H. H. Evans.—C. E. Whitby has sold Service Garage to F. L. Cludas.—Bryant Motors Co. has opened its new body building plant on Fairview Ave., employing 35 men.

Twin Falls, Ida.—Intermountain States Truckmen's and Automobile Carriers' Association, successor to Idaho Truckmen's Association, has been formed here by vote of 100 delegates at a 2 days' convention; G. L. Tyler was chosen president.

Ogden, Utah.—A. D. Wheelwright has been made Savage tire dealer here.

Fallon, Nev.—L. C. Taylor has bought Fallon Motor Sales, Inc., Ford and Lincoln car agency.

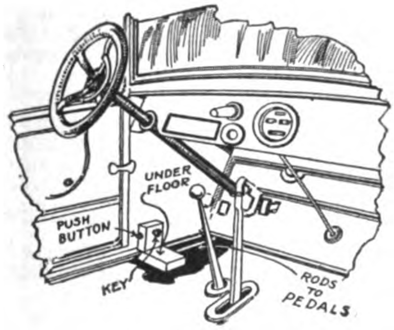
Phoenix, Ariz.—Coates Tire House, 301 N. Central Ave., has been reorganized as Sabra Rubber Co., handling Dayton tires.—Harold L. Arnold, Inc., sold 13 Essex and 9 Hudson cars in a recent week.

Nogales, Ariz.—Arthur Peck has bought the interest of Ed. Jake, his partner, in White Front Garage.

Calexico, Cal.—Motor Service Garage has been bought by P L. Moore and the name changed to Gateway Garage & Sales Co.

Auto-Set Lock

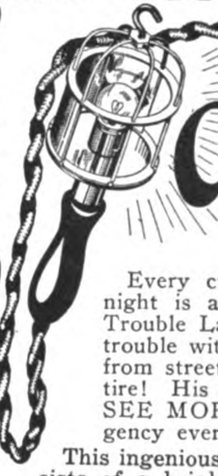
Your car cannot be driven
or towed away



A Real Safety Auto Lock

Manufactured by
CRAYNE CO.
1177 E. 55th St., Los Angeles, Calif.

ANGELES SALES CO.
Pacific Coast Distributors
942 S. Los Angeles St., Los Angeles, Calif.
Let Our Salesmen Demonstrate



a Winner!

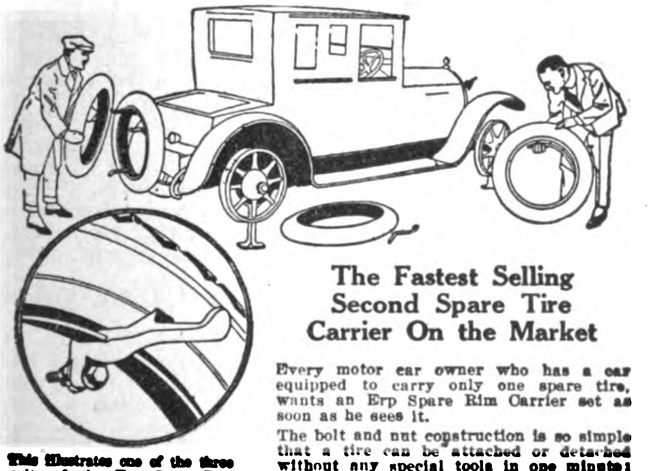
Every customer of yours who drives at night is a prospect for the SEE MORE Trouble Lamp. He cannot look for engine trouble with a match. He may be far away from street lights when he has to change a tire! His head or tail light may go out—a SEE MORE Trouble Lamp fills the emergency every time.

This ingenious device that retails for $2.75 consists of a bright lamp, with strong, double reflectors, a handy handle, a hook for ready hanging, 10 feet of cord and a plug to slip in the dash light socket.

It sells on sight as a long-needed accessory. A trial order will convince you it is a "best seller"! Write for prices NOW to

Davis Radio Signal Co., Inc.
Highland Ave., Hollywood, California

SEE MORE
TROUBLE LAMP



The Fastest Selling Second Spare Tire Carrier On the Market

This illustrates one of the three units of the Erp Spare Rim Carrier which completes the set.

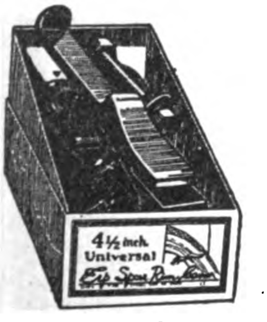
Every motor car owner who has a car equipped to carry only one spare tire, wants an Erp Spare Rim Carrier set as soon as he sees it.

The bolt and nut construction is so simple that a tire can be attached or detached without any special tools in one minute; an ordinary wrench is all that's needed.

The Erp Spare Rim Carrier has the three-point suspension, inside grip so that there can be no chafing at any point.

There are no straps, no rattle, no chafing and no soft spots on a tire which is carried by this device.

The complete set comes in a box no larger than a pound box of candy.



Sedgwick Sales Company
1405 Sedgwick Ave., New York City

Sales Representatives
Allied Industries, Inc., 283 Minna. St., San Francisco, for California, Oregon, Idaho, Washington, Nevada, Arizona.
The Rubber Sales Co., 53 West Jackson Blvd., Chicago, for Illinois, Indiana, Michigan, Wisconsin.

Erp Spare Rim Carrier
"CARRY TWO SPARES AND BE SAFE"

Columbian Partition Mounted 3 Point Supported Truck Tanks

Exclusive and Extraordinary Features—Partition Mounted, Lowest Mounting, Less Deadweight. Three Point Supported, No Twisting Strains, Less Upkeep Expense. Jointless Pipe Lines with Funnel Outlets. Welded-on Bucket Boxes. Removable and Adjustable Side Carrying Racks, Tank, Mounting, Pipe Lines and Bucket Box Welded into a Monometallic Unit. Correct Distribution of Load on Rear Axle. The Triumphant Climax to Truck Tank Construction.

Columbian Monometallic Dump-Beds

Longitudinal sills formed from side and bottom members. All members electrically welded into monometallic unit. No rivets in entire assembly. Stronger, more rigid, longer service. Five models. Tail gate hinged top and bottom—double acting.

Columbian Motor-Motive Hoist

The Ultimate in Power Hoists. Its action is direct and positive. Its performance is not dependent on any inconstant third agent such as oil and pressure. The power of the motor is transmitted direct from transmission take-off or propeller shaft to lifting cables through clutch controlled bronze worm and bull gear. A two-way, combination disc and cone clutch operating on the worm shaft controls elevation and descent and when thrown in neutral holds the body at any stage of elevation. Light weight, compactness, simplicity, durability, power and economy are its keynote features.

Columbian Lightning Hoist

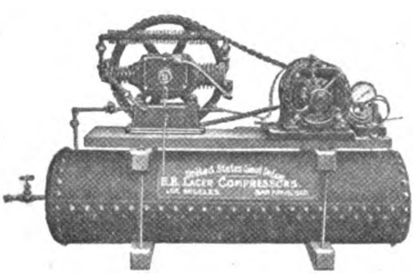
A simple device built upon sound engineering principles, giving power that enables a man to dump a five-ton load with ease and without power expense. Narrow and compact in construction. Mounts in 11-inch space.

The Big 4 of the Truck Equipment Field

A letter, a telegram or a ring on the telephone will bring full data and way down prices on any one or all three.

Tanks for the World
1519-1625 West 12th Street

Established in 1904
Kansas City, Mo.



The same reliable U. S. Compressors.

Reliable 10 years ago.

More reliable Today.

Many copies appear in the market but only one original.
The best with patented features

E. B. LACER

Air Compressors — Electric Motors

Los Angeles
1224 East 8th St.

San Francisco, Cal.
401 Van Ness Ave.

RUSH
ADJUSTABLE
BRAKES
FOR FORDS

P-D-Q
VALVE GRINDING COMPOUND
THE FASTEST ABRASIVE KNOWN
Unequaled for Cylinder Lapping
WALTER W. BIDDICK
DISTRIBUTOR
LOS ANGELES SAN FRANCISCO

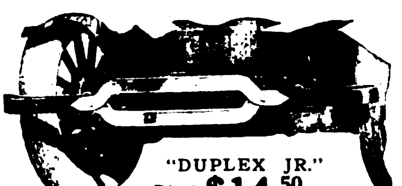
All That the Name Implies

A Real Time Saver

4-oz. cans...$ .50
8-oz. cans... 1.00

Order from your jobber, or
WALTER W. BIDDICK, Distributor
1318 South Figueroa St Los Angeles

Deservedly Popular



"DUPLEX JR."
Black $14.50
Nickel $2 Extra

NEW ERA DUPLEX BUMPERS are in greatest demand because of their stylish appearance, strength, power to protect, lower cost and permanent guarantee. Attaching arms interchangeable for large and small cars. NO DEAD STOCK. Write for New Bumper Catalog.

New Era Spring & Specialty Co.
73 Cottage Grove Ave., Grand Rapids, Mich.
GRAF SALES COMPANY
Williams Bldg., San Francisco, Calif.

Ford Owners Can Stop that

SQUE-E-E-EK *and* RAT-T-T-TLE

and prolong the life of passenger or commercial car by having it equipped with the ARG Auxiliary Spring and ARG fender braces.

The ARG Auxiliary Spring is a combination shock absorber and front spring protector, retailing at only $4.00. The ARG front and rear fender braces, retailing at $2.50 each, make fenders rigid and keep them from rattling.

ARG accessories are good accessories—the kind dealers like to sell!

Manufactured by

ARG AUXILIARY SPRING CO., Birmingham, Ala.

San Francisco, Cal.—Globe Auto Supply Co., capital stock $500,000, has been incorporated by W. G. Butler, B. Perini, D. Bucholz, M. L. Samuels, E. Elliger.—Chester S. McLeod and S. Bernheimer have formed the partnership of Mac-Berne Motors Co., to handle new and used cars.—E. M. Harbor has opened State Garage in a new 2-story and basement garage on Leavenworth St. near Bush.—Automobile Glass House has leased adjoining stores at 1239-1243 Sutter St.—Hood Rubber Co. has moved to 140 3rd St.—E. Bennett has bought the interest of his partner, E. Burke, in National Motor Exchange, 367 Golden Gate Ave.—Pioneer Battery & Electric Co., handling Columbia storage batteries, has taken in Warren Wasson as a partner.—Rotary Motors Co. has been formed by W. L. Hoffman, Frances R. Wilson, E. A. Potter, with $100,000 capital stock.

Oakland, Cal.—L. D. Whitehurst has been made manager of Cole Motors, Inc., Cole car agency.—Dinsmore Brothers, sporting goods and automobile supply dealers, have opened a new department to handle all kinds of automobile glass supplies, in charge of E. Frisbie, 2335 Broadway.—Service Tire & Rubber Co., L. J. Schaackey manager, has been made Lee tire distributor here.

Richmond, Cal.—Edward P. Johnson has opened a complete automobile top manufacturing and repair shop, 257 15th St.

Berkeley, Cal.—Jim Conley has opened an Exide battery station and will do electric car repairing.

Martinez, Cal.—T. W. Wood has taken the Durant car agency here, Ferry and Escobar Sts., as branch manager for Kirkpatrick & Wood, Richmond.

Antioch, Cal.—The Durant car will be handled here by S. W. Ligon as branch manager for Kirkpatrick & Wood, county distributors.

Vallejo, Cal.—Western Die Casting Co., Berkeley, is reported to be planning erection of a large factory here.

Sebastopol, Cal.—Sebastopol Battery Shop has taken the Bosch magneto agency here.

Petaluma, Cal.—Peter Talamantes and James Barron, operating Bodega Ave. Garage, have incorporated for $4000.

Santa Rosa, Cal.—H. F. Rust Tire Co. has sold its Kelly-Springfield tire agency to Simcoe Vulcanizing Co. on Mendocino Ave.

Galt, Cal.—Service Garage, formerly operated by George Smith, has been bought by Marshall Gower & Sons.

Woodland, Cal.—V. J. Nyholm has opened an automobile painting works, 328 3rd St.

Winters, Cal.—Leo. Errington has opened a storage battery and ignition repair shop in Depot Garage.—Frank Hiner has opened Hiner's Service Station, Railroad Ave. and Russell St.

Yuba City, Cal.—A. H. Scott has sold his service station and accessory store, Plumas St. and Colusa Road, to B. T. Millard and J. Cawood.—Lew Robinson has taken over Shasta Garage.

Guerneville, Cal.—Weber & Marshall have sold Guerneville Garage to S. B. Buckner and Bernard G. Sears.

Fortuna, Cal.—Fortuna Garage will have a fireproof garage erected for it on C St.—Leach & Smith, Studebaker car and White truck dealer, will occupy the present quarters of Fortuna Garage in a few months.

Hydesville, Cal.—R. D. Ingraham and Oscar Lipscomb have taken over Hydesville Garage.

Ferndale, Cal.—Viggo Erikson, owner of Ferndale Iron Works, has taken over his repair department, formerly leased to Walter Gross and Leonard Terkelsen; Gross has opened a repair shop in Kemp Warehouse, and Terkelson a battery repair shop in Blackburn Bldg. on Main St.

Eureka, Cal.—Charles Green & Co. have been incorporated for $100,000 to do a general garage business.

Ashland, Ore.—Dix & Son have taken the Overland and Willys-Knight agencies.

Exeter, Cal.—A. G. Larson and Ted Berg have leased E St. Garage, Larson to operate Super-Service Vulcanizing Works and Berg a general repair shop.

Paige, Cal.—H. G. Hancock has opened a garage and car agency

Tulare, Cal.—E. Carlisle has opened an acetylene welding shop, 217 S. O St.

Oakdale, Cal.—J. Enos has taken the Willard storage battery agency here in the new Oakdale Investment Bldg.

Fresno, Cal.—Handley-Knight Pacific Co., Handley-Knight car dealer, is now located at 1445 Van Ness Ave.—B. H. Delk has bought Accessory, Oil & Grease House, 2711 Tulare St., handling Valvoline products.—Fisk Tire Co., Inc., headed by W. B Parks, moves April 1 to its fine building on Stanislaus St. near Broadway.—J. C. Pine of Playa Battery Co., Fresno St. and Van Ness Ave., has taken the agency for Mac-Dry storage batteries.

Merced, Cal.—A. Q. Peterson's Auto Top Works has been moved to new quarters, 310 17th St.

HOOD

HARD RUBBER

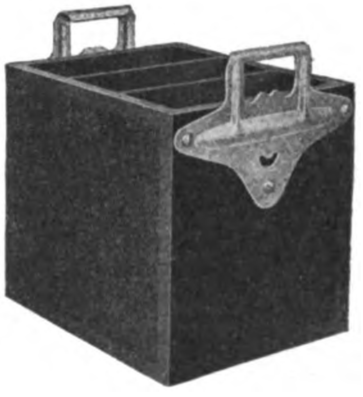
Battery Jars, Covers and Parts

COMBINATION BOXES

Stock Carried in Los Angeles

HOOD RUBBER PRODUCTS COMPANY

Factory Watertown, Mass.
1223 S. Olive St., Los Angeles, Calif.
Address Coast Correspondence to Los Angeles



DENBY
MOTOR TRUCKS

REDUCED PRICES

Effective Jan. 1, 1922

	Was	Now
Model 31, ¾-1¼ ton Speedster	$1625	$1485
Model 33, 1½-2 ton	2300	2145
(Pneumatic tires used on above models)		
Model 34, 2 ton	2600	2395
Model 35, 2½-3 ton	....	2795
Model 27, 4 ton	4200	3895
Model 210, 5 ton	4850	4295
Model 214, 7 ton	5500	4945

F. O. B., Detroit, chassis with seat

With rock bottom truck and service prices, the Denby line offers a very desirable factory connection to live dealers.

Write or wire for full details

LETS TALK BUSINESS AND GET BUSY

Denby Motor Truck Company
Detroit

1922
Automobile Mailing Lists

Ready for Early Delivery

By

COUNTIES TOWNS
MAKES OF CARS

Robinson & Company
830 Market St., San Francisco

MOTOR WEST

Reaches a larger percentage of dealers and repairmen than any automotive trade publication circulated on the

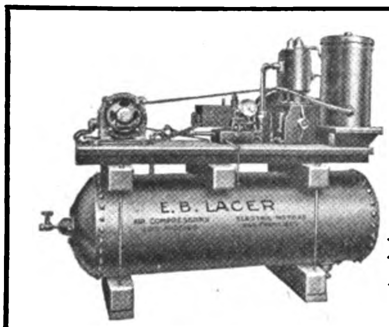
PACIFIC COAST

GRAMM PIONEER MOTOR TRUCK
LIMA, OHIO, U.S.A.

"The Recognized Standard of Quality"
A complete line from Speed Truck to 6 ton.

All attractively priced. Unusual selling features.
Strong dealer helps. Write for territory, discounts, etc.

THE GRAMM-BERNSTEIN MOTOR TRUCK CO.,
Lima, Ohio, U. S. A.



High Pressures Big Volumes

IS THE CALL TODAY

If it is Compressed Air 1 to 80 cu. ft. of air per min.

See E. B. LACER

Air Compressors — Electric Motors

Los Angeles
1224 East 8th St.

San Francisco, Cal.
401 Van Ness Ave.

SCANDINAVIA

Trade Mark Registered in U. S. Patent Office.

BRAKE LINING FOR FORD CARS

SCANDINAVIA is woven from selected, long staple cotton on looms especially designed for FORD brake and transmission lining. Weighs 25 to 35 per cent more than other linings—which means more yarn, more body and more actual value.

Send for Illustrated booklet and our Attractive Jobber or Dealer Proposition

SCANDINAVIA BELTING CO.
106-108 Reade St., New York City
Branches—Atlanta, Cleveland, Los Angeles, Portland, Boston, Chicago, Easton, Pa., Pittsburgh, San Francisco

MORELAND MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST

SOUTHERN ENGRAVING AND COLORTYPE CO.

Our Artisans and Equipment Rank Second to None West of Chicago

ALL WORK GUARANTEED

Photo Engravings

SOUTHERN ENGRAVING & COLORTYPE CO.
Phone 11046 LOS ANGELES 111 West 3rd

Portland, Ore.—Benz Spring Co., capitalized at $20,000, headed by August Benz, Jr., former vice-president and manager of Portland branch of Laher Spring Co., Carl Grimm and Louis Grimm, has opened at 89-91 9th St. to handle a large business in automobile spring manufacturing and repairing.—J. M. and Dudley Tinker have each bought a third interest in Godbey's Garage, 5th and Hoyt Sts., from C. R. Godbey.

Astoria, Ore.—Clyde Rowan, head of C. Rowan Auto Co., Studebaker agency, has leased Gaston Bldg., 13th and Exchange Sts., with space for 50 cars.

Vancouver, Wash.—E. Gabrielson Garage has been sold by Gabrielson to George Haskins, who has been his employe for some time.

Tacoma, Wash.—N. Baldwin has sold Rialto Garage to H. E. McEldowney, and has opened Standard Auto Electric Corp., 718 Broadway.—Edward Paulson has been made shop superintendent of Whitehouse Garage & Welding Works on South 36th St.

Seattle, Wash.—Robb's Garage, headed by H. R. Robb, will have a 1-story garage built for it at 4909 Stone Way, costing $5000.—Reynolds & Reynolds, Seattle and Tacoma, will distribute Continental Hi-Speed piston rings and Hartford shock absorbers in western Washington.

Port Angeles, Wash.—W. A. Huffman and E. Olsen have opened Lincoln St. Tire Shop, handling Firestone tires.

Mt. Vernon, Wash.—Power Motor Co. on Division St. has taken the Hudson and Essex agencies.

Yakima, Wash.—Western Auto Supply Co. has moved to its new building, 110-112 N. 1st St., E. M. Schnase manager.—King Tire Co., operated by R. and J. P. King, has built a large addition to its shop, doubling the floor space.

White Salmon, Wash.—George C. Jennings has bought the interest of Leslie Egan in White Salmon Garage and has formed the partnership of Jennings & Winter.

Cheney, Wash.—Northwest Storage Battery Co., of Spokane, has opened a service branch here, Glen Madison, manager.

Spokane, Wash.—Laher Auto Spring Co., Portland and Seattle, will open a third spring factory here on a site not yet announced.

Cle Elum, Wash.—Reliable Auto Co., G. I. Wilson manager, on First St., has added new equipment and doubled its floor space.

Stockton, Cal.—Critz-Zenith Sales Co., distributor of Critz lubricators, Zenith carburetors and Brunswick tires, has opened in its new building, 347 E. Miner Ave.—W. J. Benson Co., Stephens car dealer, has occupied a new building, 230 N. Sutter St.—Adams Mfg. Co. has patented and is manufacturing a folding piston ring and piston removing tool.—San Joaquin Tractor Co., Cletrac tractor dealer, is now located at 15-17 S. Aurora St.—Skinner-Hammond-Murray Co., El Dorado St. and Miner Ave., is now dealer for Reo and Gardner cars and Reo trucks.—Marengo & Quigley, the latter a former field representative for Samson Tractor Co., have opened at 327 E. Market St., handling Samson tires.—F. Graeber has bought half interest with H. W. Hetrick in Waterloo Road Garage.—Field & Wade have opened a Westinghouse battery agency, 28 S. Aurora St.—Durbin & Castor have opened an automobile ignition and electric shop, 917 N. East St.—Cutting & Lusignan, Maxwell and Franklin dealers, now are located at 420 E. Weber Ave.

Lodi, Cal—F. A. Divine has become partner with Divine & Wright, operating the Ford Repair Shop.—J. D. Christner, Dort and Davis car dealer, has located in Broadhurst Bldg. on Locust St.—Rice & Johnson, 19 W. Pine St., have taken the Durant car agency.

San Jose, Cal.—Arnold-Nichols Motor Co., Inc., has been formed with $50,000 capital stock by C. H. Nichols, S. C. Arnold, and others.

Turlock, Cal.—Erickson Brothers have opened a battery and ignition shop, 112 W. Olive St., handling Gill batteries.

Madera, Cal.—James Holmes has moved Auto Top Shop to his new building, 214 S. D St., where he has fireproof quarters with 1875 square feet.

Modesto, Ca.—Tosher & Hodgert, handling Gill batteries, have opened a battery and ignition shop, 1015 K St.—S. E. Gillette has taken the Durant car agency, with sales room at 1122 10th St.—Stanislaus Auto Supply Co. has moved to a new building, 10th and H Sts.—W. T. Owens Motor Sales Co., Stockton, handling Oakland and Liberty cars and automobile accessories, has opened a branch in the former Davis Garage, 10th and G Sts.—Jesse L. Solomon has opened a battery and carburetor shop on Jay St.

Newman, Cal.—H. Lorenson has bought the interest of his partner, J. I. Kinnear, in K-L Garage.

Manteca, Cal.—Ed Baker has become partner of Walter Dugan in West Manteca Garage.—Jason & Hagdorn have occupied their new garage on State Highway.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

CYLINDER REGRINDING CYLINDER REGRINDING

24 Hour Service — B-N Piston Pins

B-N Jobbers give prompt, efficient 24-hour service—the kind of service that helps you please your customer and get his car in service again quickly. This is because B-N Jobbers are selected with care—must satisfy us on these points:

Willingness and Ability to carry a complete stock.
Location such that repair shops can get 24-hour service.
Organization to make immediate deliveries without mistakes.

These are approved B-N Jobbers:

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Midwest Auto Supply Co.
Los Angeles, Cal.
Weinstock-Nichols Co.
Oakland, Cal.
Weinstock-Nichols Co.
Oklahoma City, Okla.
Sharp Auto Supply Co.
Omaha, Neb.
Sunderland Machinery & Supply Co.
Portland, Ore.
Ray Daley
San Francisco, Cal.
Bryce Howatson
Weinstock-Nichols Co.
Topeka, Kas.
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CHROME
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VALVES

A better finished Valve accurately machined from Chrome Vanadium steel. Heads designed to prevent warping and burning. A quality Valve at a popular price.

Standard and 1-64 inch oversize stems for all makes of cars and trucks carried in stock.

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Phone Pico 3201
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PUBLICATIONS

The VETERANS' JOURNAL
an independent weekly newspaper
US

DEALERS, GARAGEMEN and EMPLOYEES

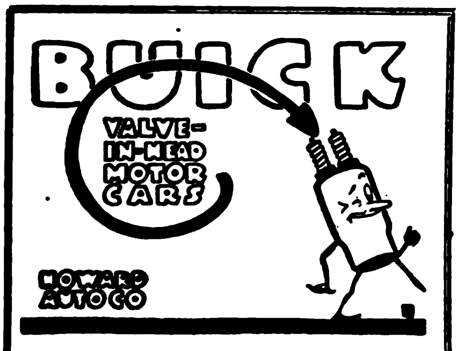
MANY of you are ex-service men—vitally interested in politics, politicians and public policy. The Veterans' Journal is an independent weekly news paper—we are not a part of nor do we represent any political faction or veterans' organization. We will at all times endeavor to discuss impartially all matters of public interest, especially to ex-service men and their friends along the entire Pacific Coast.

The subscription price, $2.00 per year, gives you fifty-two copies of the best Veterans' paper west of the Rockies (by veterans we mean those who fought in the late war, Spanish-American and Civil War).

Mail your $2.00 to-day—your paper will come to you promptly every week.

THE VETERANS JOURNAL
119 Henne Bldg.
122 W. 3rd St., Los Angeles, Calif.

AUTOMOBILES

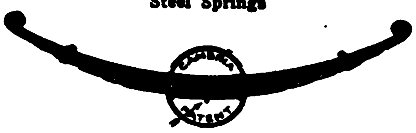


1323 S. Flower St. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

SPRINGS

Cambria Spring Company
"Known the West Over"
CHROME VANADIUM AND CARBON
Steel Springs



"CAMBRIA" Twin Bar, the Unbreakable, Rattle and Squeak Proof Bumper

Madison Oilkipps
High Grade Second Growth Hickory Wheels
Springs, Wheels and Bumpers Repaired.
Wrecking Jobs Our Specialty.
Tire Racks and Platforms Applied
Forgings Demountable Rims Applied

916 SO. LOS ANGELES STREET
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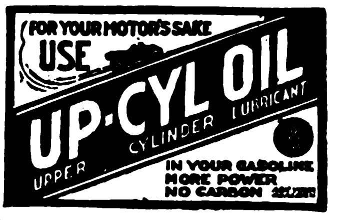
LUBRICATING OILS

See Signature of C. C. Bogardus on Can

At Your Dealer's



For lubricating all upper parts of a motor, such as the valves, guides, valve stems, seats, cages, upper cylinder walls, and the sealing of the combustion chamber with a fine film of oil by vaporization.

WEST COAST SUPPLY CO.
909 S. Grand Ave. Los Angeles

SPEEDWAY BUILDERS

SPEEDWAYS

To prospective Speedway Promoters: For plans and full particulars, write to John S. Prince, the originator of the Board Speedway for Automobile Races, care of
PRINCE SPEEDWAY CONSTRUCTION CO.,
First and Oak Streets, Oakland, Calif.

Bassick Co. in New Plant.

Bassick Manufacturing Co., manufacturer of the Alemite lubricant system, has moved into its new plant at 2650 North Crawford Ave., Chicago. Increasing demand for Alemite products has made necessary larger quarters. Another contributing factor is the return toward normal of more than 300 automobile manufacturers whose cars have the Alemite system as standard.

The new plant has 70,000 square feet of floor space. It is of 1 story, saw tooth style and so designed that artificial light rarely will be necessary. The land area covers approximately 160,000 square feet which will allow for future expension.

Among comforts for employes will be an uptodate restaurant.

Few organizations have had such a rapid expansion, so quickly. Three years ago the Alemite system was introduced. Today 1,500,000 cars have it. It also is used in scores of industries, notably in steel plants. The company has more than 10,000 dealers throughout the United States.

* * *

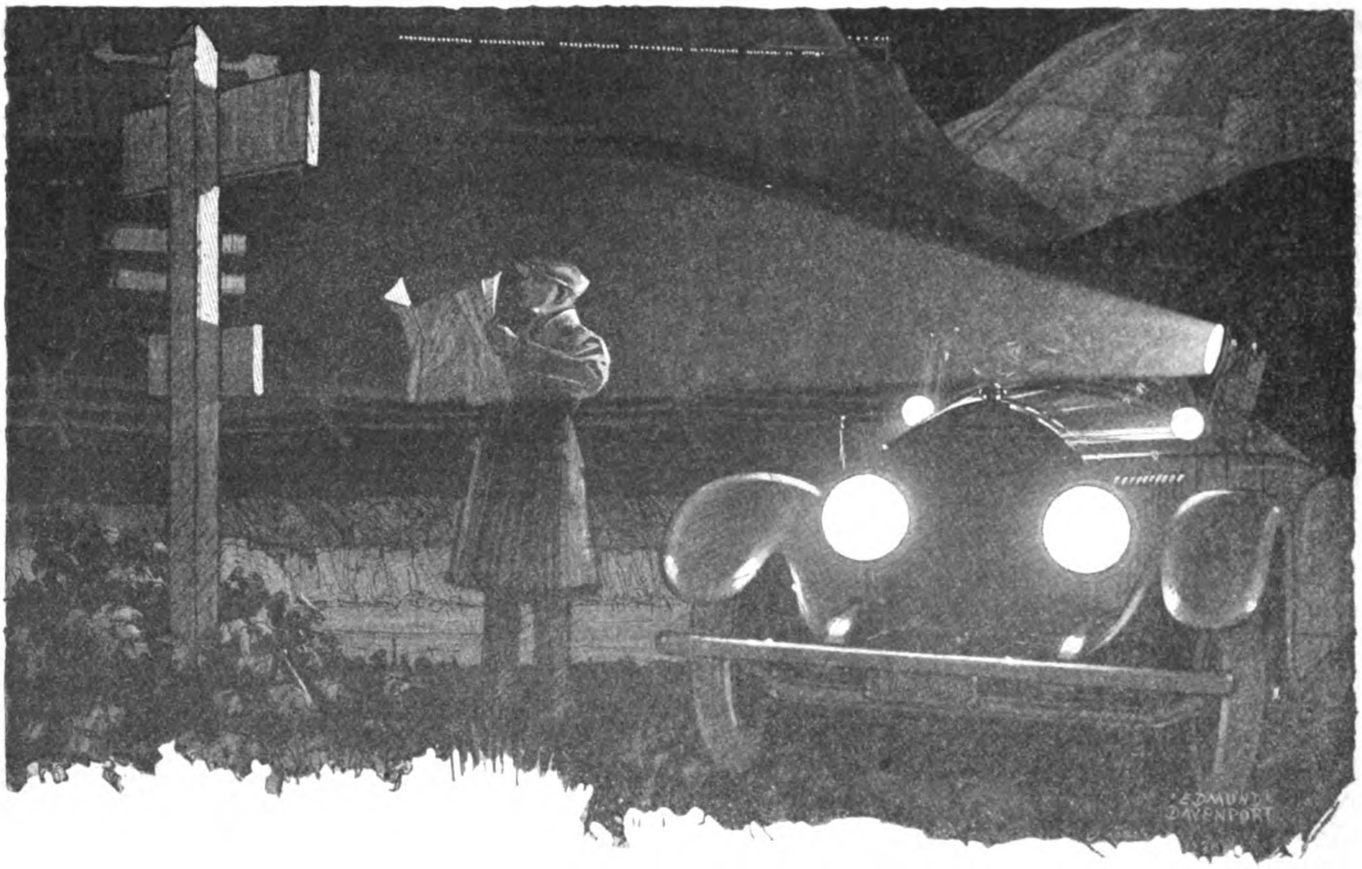
K. T. Leech Joins Earl Motors.

About six months ago K. T. Leech of Dallas, Tex., retired from the automobile business (in which he had been some ten years, in both wholesale and retail work) to go to Germany to enter a new field of endeavor. He returned about the first of the year and has just become a district sales supervisor for Earl Motors, Inc., in the states of Oklahoma, Louisiana and Texas, where he is very well known.

* * *

Hunt Leaves Columbia.

William C. Hunt, for the past two years advertising manager of Columbia Motors Co., has resigned. Previously he was with the Packard for five years.



TO make the name Westinghouse as significant of dependability when applied to storage batteries as it is when associated with air brakes and railway signals—that is the ideal under which Westinghouse Batteries are engineered and built.

To enable every Westinghouse distributor or service station operator to look upon his business as one promising sure and substantial growth—that is the spirit behind Westinghouse sales co-operation.

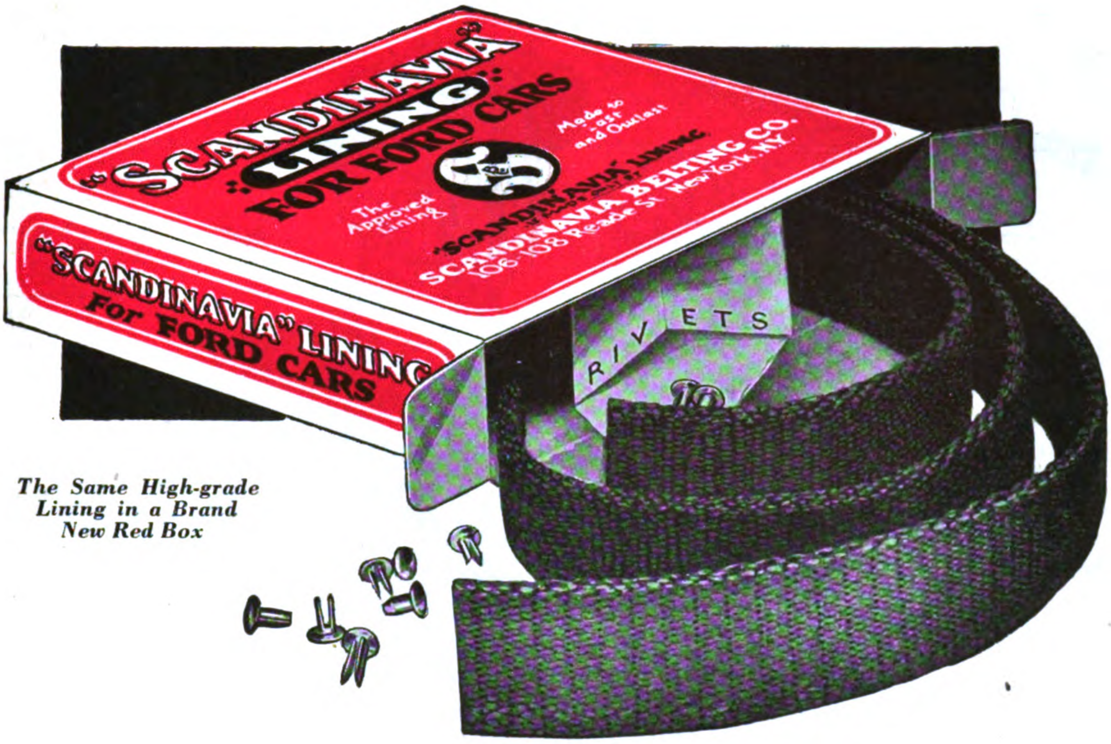
The man who hangs out his sign as a Westinghouse Battery man has a valuable advantage to start with: Association with a name that immediately inspires public confidence! Seventeen hundred Westinghouse Service Station men have already capitalized this advantage. There is room in unoccupied locations for many more.

WESTINGHOUSE UNION BATTERY COMPANY
SWISSVALE, PA.

WESTINGHOUSE
RADIO
BATTERIES
offer a new and profitable addition to the battery man's business.

One quality of battery—the BEST Westinghouse can build. Oversize, reasonably priced, and backed by a guarantee new in features and unequaled in liberality.

WESTINGHOUSE
BATTERIES


"SCANDINAVIA"
"LINING"
FOR FORD CARS
Made to Last and Outlast
The Approved Lining
"SCANDINAVIA" LINING
SCANDINAVIA BELTING CO.
106-108 Reade St. New York, N.Y.
"SCANDINAVIA" LINING
For FORD CARS
RIVETS

The Same High-grade Lining in a Brand New Red Box

Scandinavia Brake Lining
is Made Especially for Ford Cars

SCANDINAVIA has become the accepted lining for FORDS, because it has proven itself to be a lining that will deliver 100% service during a long life of hard usage.

Woven from selected, long staple Southern cotton on looms especially designed for FORD brake and transmission lining. SCANDINAVIA weighs 25 to 35 per cent more than other linings—which means *more yarn, more body* and *more actual value.* Especially impregnated, processed and hardened (to resist heat, oil and grit and yet remain sufficiently pliable) to prevent chattering or glazing.

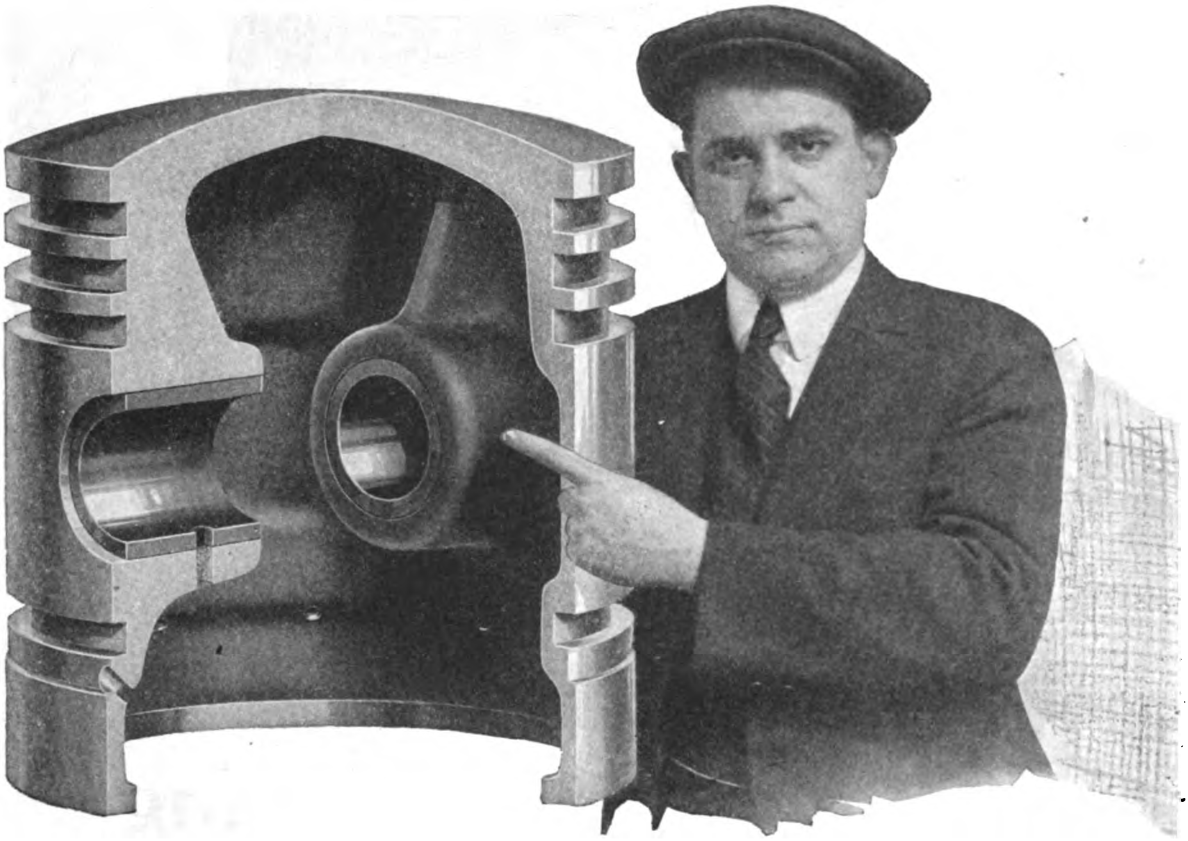
SCANDINAVIA is put up in convenient boxes with the necessary solid brass rivets for fastening to the bands. Cut into three equal-length pieces for Low and High Speed, Reverse and Brake Bands.

Write for Our New Folder "How to Change Ford Brake and Transmission Linings." We Have an Attractive Proposition for Jobbers and Dealers.

SCANDINAVIA BELTING CO.
106-108 Reade St., New York, N. Y.

BRANCHES:

Atlanta
Boston
Chicago
Cleveland
Easton, Pa.
Los Angeles
Pittsburgh
Portland, Ore.



Here's why the DOWMETAL PISTON can live up to all of it's claims

No freak or skeleton construction here. Being much lighter even than aluminum, this tough metal may be used generously for thick walls and reinforcing. Yet with all its sturdiness and strength, the weight of the DOWMETAL Piston is far less than that of the majority of so-called light-weight pistons.

Day after day the mails bring an ever increasing flood of testimonials from users and dealers. Folks who were irritated by vibrating engines almost to the point of disposing of their cars, tell how DOWMETAL Pistons have done away with rattle and annoyance. Racers write us of contests won through the speed DOWMETAL gave their engines. Tourists write of transcontinental tours—of long smooth runs—of hill-climbing performances — of pulling through mud and heavy roads with ease they never knew before.

A dealer is on the way to a quick sale when he can say to a car owner—"Yes, DOWMETAL Pistons will put the old pep back into your car. They will probably give you more speed than when your car was new. With new or old cars they will give you more pull in hard going—more power on hills. They will not score the cylinders."

These merits have enabled certain dealers to make more money selling and installing DOWMETAL Pistons in the first three months of 1922 than they made on all the rest of their sales. Write for details. The overhauling season is on. A set of DOWMETAL Pistons in every engine you take down will make you a multitude of new friends.

Dowmetal Division

THE DOW CHEMICAL COMPANY TRADE DOW MARK *Midland Mich USA*

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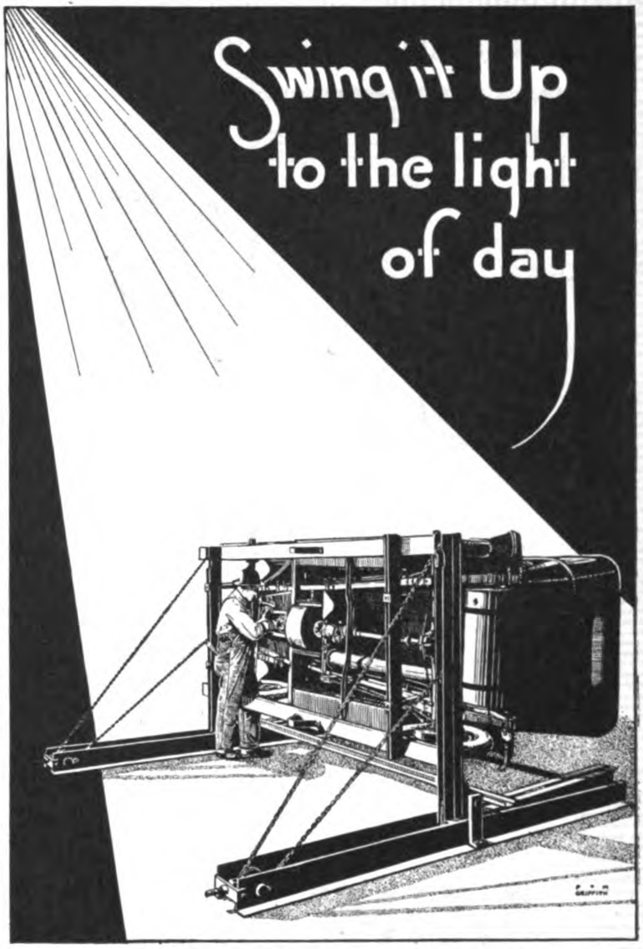

Swing it Up to the light of day

The Gartner Work and Display Stand

A tremendous wave of repair work is coming

Be prepared to handle a big share of this work in your shop.

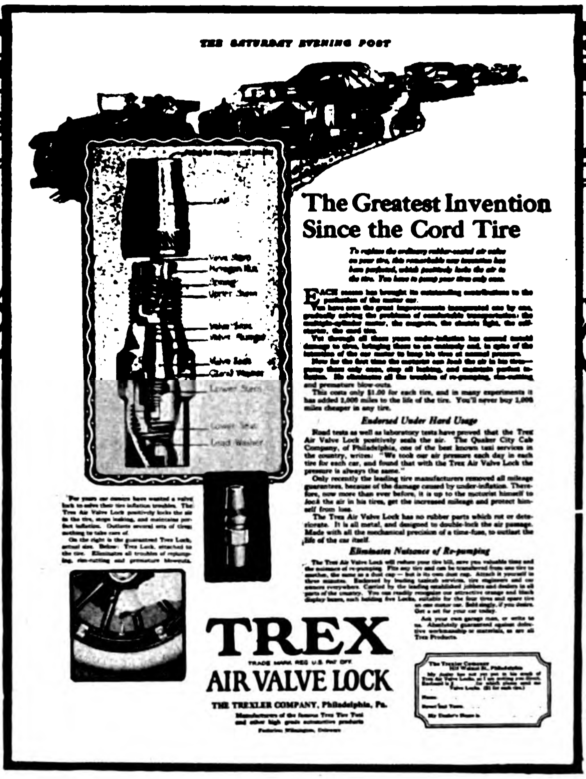
The Gartner Work and Display Stand enables your mechanic to do twice as much work a day because it turns the car bottom side up where he can see and reach any part easily and quickly.

Write today for descriptive literature and we will explain our plan which enables you to install a Gartner Stand now and let it pay for itself.

GARTNER'S STANDARD GARAGE EQUIPMENT CORP.

Manufacturers and Patentees

611-612 Balboa Bldg., San Francisco, Cal.



THE SATURDAY EVENING POST

The Greatest Invention Since the Cord Tire

This costs only $1.00 for each tire, and in many experiments it has added 1,000 miles to the life of the tire. You'll never buy 1,000 miles cheaper in any tire.

Endorsed Under Hard Usage

Road tests as well as laboratory tests have proved that the Trex Air Valve Lock positively seals the air. The Quaker City Cab Company, of Philadelphia, one of the best known taxi services in the country, writes: "We took our air pressure each day in each tire for each car, and found that with the Trex Air Valve Lock the pressure is always the same."

Only recently the leading tire manufacturers removed all mileage guarantees, because of the damage caused by under-inflation. Therefore, now more than ever before, it is up to the motorist himself to *lock* the air in his tires, get the increased mileage and protect himself from loss.

The Trex Air Valve Lock has no rubber parts which rot or deteriorate. It is all metal, and designed to double-lock the air passage. Made with all the mechanical precision of a time-fuse, to outlast the life of the car itself.

Eliminates Nuisance of Re-pumping

TREX
AIR VALVE LOCK
THE TREXLER COMPANY, Philadelphia, Pa.

Reproduction of our Saturday Evening Post advertisement, April 8th issue. This is the first of a series of national ads now running.

Millions---

Will Know About It

In every state in the Union our complete national advertising campaign is telling motorists the story of the Trex Air Valve Lock—getting them interested in buying.

In the Saturday Evening Post with its two million and a quarter circulation, the Country Gentleman going to three quarters of a million homes, and six trade papers going to a hundred thousand subscribers, our advertisements are appearing regularly.

Figuring two readers to each publication—considered a modest estimate—our ads are reaching more than six million readers regularly. The dealers who are "hooking up" to this advertising program are going to make money. Will you be one of them?

Over ten million car owners need and want the Trex Lock, the greatest improvement for the motor car since the inception of the cord tire. Sell a Trex Lock to every customer in your store. It's an easy way to boost each sale.

Our direct by mail literature, bill-boards, counter and window displays, and general publicity mean an advertising co-operation so complete that the dealer cannot afford to overlook it.

Get them in stock for the demand that is sure to come. Ask your jobber.

TRADE MARK
TREX
REG. U.S. PAT. OFF.
AIR VALVE LOCK

THE TREXLER COMPANY~PHILA. PA.

Business for You Dealers!

"Ford Faithful" Oiling System

FORD OWNERS

See your dealer today about the "Ford Faithful" Oiling System at

$5.75

He has it or can get it for you. If not, send money direct to us. Ten days' trial, with your money back if not satisfied.

50% Increase In Motor Efficiency

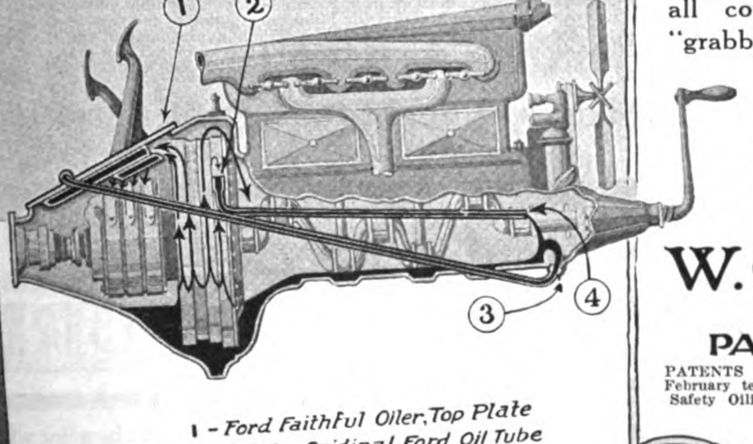
Ford owners are jumping at this relief from lubrication troubles! The Ford Faithful Oiling System keeps a stream of oil where it is bound to splash on to all bearings and into the cylinders.

No more overheating; no burning up the engine; fully 50 per cent increase in motor efficiency. The "FORD FAITHFUL" keeps the engine cool, and there is a marked saving in oil consumption.

More than that, the trap catches the sediment and foreign matter that often clog the regular Ford oil line and cause burned out bearings.

Stops Chattering and Grabbing

"FORD FAITHFUL" Oiling System takes care of the bands, supplying ample oil under all conditions, stopping "chattering" and "grabbing."



1 - *Ford Faithful Oiler, Top Plate*
2 - *Inlet - Original Ford Oil Tube*
3 - *Ford Faithful Oiler, Foot Plate*
4 - *Outlet - Original Ford Oil Tube*

And all this, it does for the Ford Owner for a cost of $5.75. It is simplicity itself to install, and can be put on in 15 minutes.

There is big business in store for every dealer that shows the FORD FAITHFUL where car owners can see it. Our national advertising creates the demand. YOU fill it. Write today—NOW—for prices to

W. O. THOMPSON
MANUFACTURING CO.
PASADENA CALIFORNIA

PATENTS UPHELD—In the U. S. District court of So. California, February term, the suit of W. O. Thompson against distributors of the Safety Oiling System was decided in favor of Thompson. The court held that the Safety Oiling System was an infringement upon the Ford Faithful Oiling System, issued an injunction against the defendant, and gave judgment for damages. Other infringements will be rigorously prosecuted.

Overhaul Time!

Why May and June are Big Timer Months

IT'S the "open season" for amateur repairmen. Millions of Fords are being made ready for the road—groomed, greased and garnished for the season.

Good business for you dealers. Big demand for spark plugs, cylinder head gaskets, fan belts, accessories, *timers*.

Timers! How about 'em? Are you ready for the "Overhaul Time" demand? Got some timers in the window? And on the counter?

"Ask 'em to Buy"

Dealers: *If you haven't a Milwaukee Timer Display Stand for your window or counter, write us for one today. It is an effective silent salesman that displays an actual timer and constantly "asks 'em to buy." Handsomely lithographed on steel—in 5 colors. You need one to properly merchandise your Milwaukee Timers. Sent* ***free, postpaid,*** *on request. Write for yours*

You Don't Have to Do ALL the Selling

— when you carry and display the Milwaukee Timer. Of course, it pays to push the Milwaukee, but you don't have to do it all. There's a big "pull" from your Ford owner customers who know the Milwaukee from experience and by reputation.

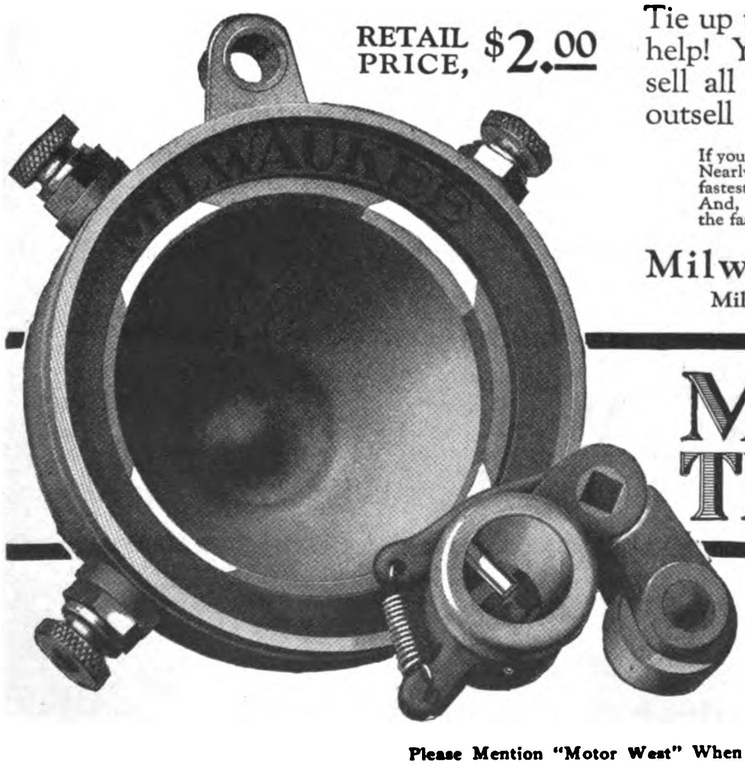
There is more consumer advertising back of the Milwaukee Timer than there is behind all other Ford replacement timers combined. This advertising is constantly working for *you* — the dealer — selling the Milwaukee to your customers so you won't have to do *all* the selling.

Tie up to Milwaukee Timer advertising and sales help! You'll find it pays. Milwaukee Timers outsell all other makes three to one. They should outsell others in the same ratio in your store.

If your Milwaukee Timer stock is low, re-order today from your jobber. Nearly all dealers find that the Milwaukee is one of the two or three fastest selling items they handle—especially at this time of the year. And, naturally, they find that the more it is displayed and featured, the faster it sells—the more profitable it is.

Milwaukee Motor Products, Inc.
Milwaukee Wisconsin

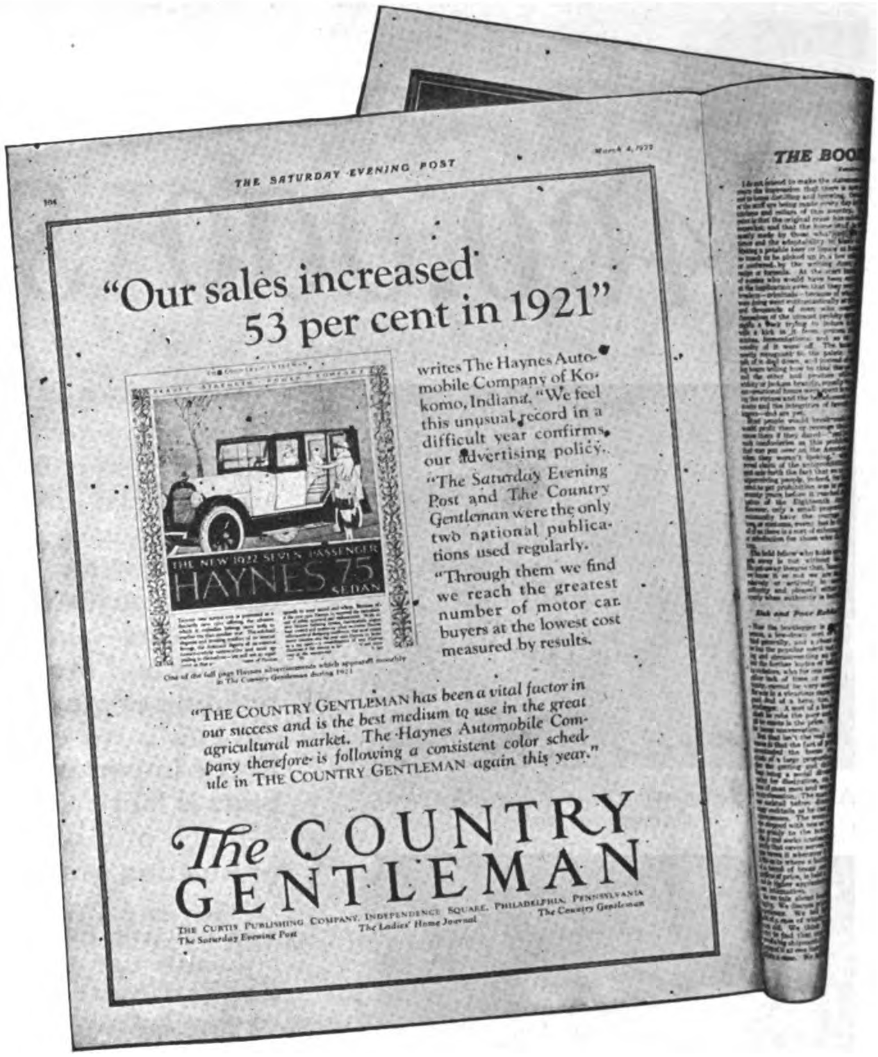
RETAIL PRICE, $2.00



MILWAUKEE TIMER *for* FORDS

Compare the Milwaukee Timer point by point with any other and you will see why it is the standard replacement timer of the world—in use everywhere, in Ford cars and trucks, and Fordson tractors.

This Record was made by HAYNES DISTRIBUTORS AND DEALERS➡



THE SATURDAY EVENING POST

March 4, 1922

"Our sales increased 53 per cent in 1921"

writes The Haynes Automobile Company of Kokomo, Indiana. "We feel this unusual record in a difficult year confirms our advertising policy.

"The Saturday Evening Post and The Country Gentleman were the only two national publications used regularly.

"Through them we find we reach the greatest number of motor car buyers at the lowest cost measured by results.

One of the full page Haynes advertisements which appeared monthly in The Country Gentleman during 1921

"THE COUNTRY GENTLEMAN has been a vital factor in our success and is the best medium to use in the great agricultural market. The Haynes Automobile Company therefore is following a consistent color schedule in THE COUNTRY GENTLEMAN again this year."

The COUNTRY GENTLEMAN

THE CURTIS PUBLISHING COMPANY, INDEPENDENCE SQUARE, PHILADELPHIA, PENNSYLVANIA
The Saturday Evening Post The Ladies' Home Journal The Country Gentleman

You have such an opportunity during 1922

These surprising figures, printed in The Saturday Evening Post of March 4, can mean but one thing—53 per cent. increase in the sale of Haynes cars during 1921 means that Haynes dealers throughout the country totaled a 53 per cent. increase in their collective sales.

Think of that record—in a year which will go down in history as the hardest in the automobile industry! It is the acid test of the Haynes character—the actual proof of Haynes foresight, which in previous years built steadfastly toward the time when true value would predominate.

Think what these figures mean for 1922. If you are a dealer qualified to represent the Haynes, if you are a merchandiser who appreciates such manufacturing support, then the Haynes for you will bring equal success in the present year.

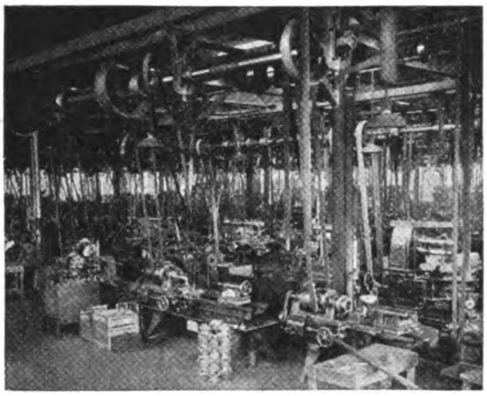
For Haynes engineers and designers, with the same skill and judgment which guided them in the success of 1921, have met the requirements of 1922 with the new, improved Haynes 55 and 75 series—a group of remarkably fine automobiles representing a range of price with a tremendously wide selling appeal. Good territory is open to the right men. Write, wire or telephone, and interviews will be arranged.

In writing, or wiring, Address Department 549

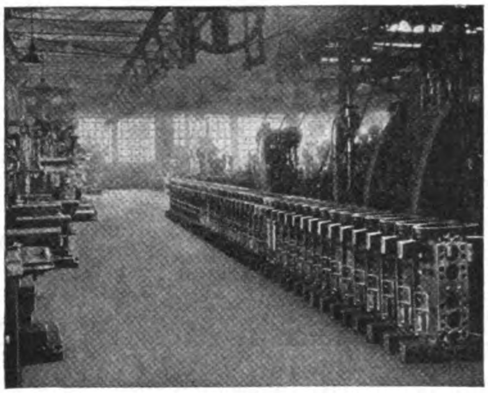
THE HAYNES AUTOMOBILE COMPANY, KOKOMO, INDIANA
EXPORT OFFICE: 1715 BROADWAY, NEW YORK CITY, U. S. A.

1893 • THE HAYNES IS AMERICA'S FIRST CAR • 1922

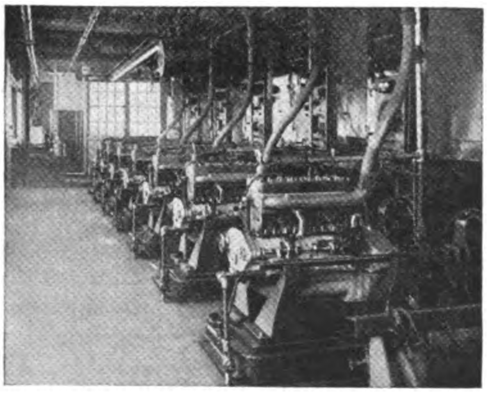
400,000 Square



A veritable forest of belting and machines! One corner of the busy Stutz plant



One day's production of crankcases after leaving the giant Ingersoll milling machines



The Dynamometer test where searching analysis of each power plant is made

THE new and enlarged Stutz factory stands as a proud monument to the financial strength and consistent growth of the Stutz as an industrial institution.

Here are 400,000 square feet of plant area devoted exclusively to the construction of Stutz motor cars—almost ten acres of the finest machinery and most advanced equipment for the building of quality automobiles.

Every important unit of the "D-H" motored Stutz is fabricated here. The machinery is new —much of it of special design for the exclusive production of the Stutz product.

The efficient European custom of machining parts, ordinarily not subjected to this operation, prevails. Connecting rods are machined all over, as are combustion chambers, cylinder heads, crankcases, transmission cases, etc.

In every phase of production hair-splitting limits are adhered to. A variance of one-tenth the thickness of tissue paper is sufficient to cause the rejection of many parts.

Every valve tappet assembly operation is held to limits of one-quarter thousandth of an inch; cylinders, axle shafts, spring bolts, etc., are machined as delicately as are the balanced cam- and crankshafts!

Every malleable entering the "D-H" motored Stutz is required to have an integral sample piece which is removed and tested before the casting is okehed.

Not one ounce of simple steel screw stock is ever used in a "D-H" motored Stutz. It is all special alloy steel made to Stutz formula; and every screw has machine-cut threads and a head milled from the bar.

Drop-forged wheel hubs only are used and are held to limits of half a thousandth of an inch. Springs are

Feet of Efficiency

of pyrometer gauged alloy steel, Brinnell-tested for uniform hardness. Their high quality and perfect balance give the Compensating Spring Suspension of the "D-H" motored Stutz its remarkable efficiency.

Even to the wood which enters Stutz bodies, the most accurate and precise tests are made. Not one piece of lumber ever is used without passing the most exacting dry-kiln tests.

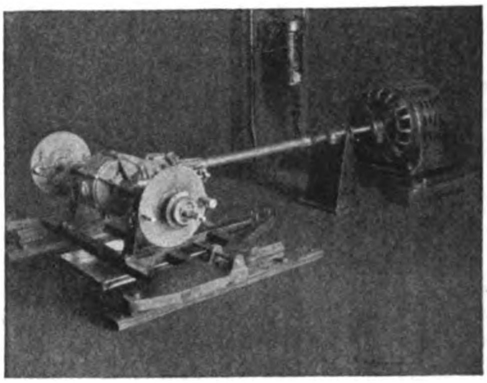
A battery of 15 dynamometers thoroughly tests each engine. Specially built axometers, installed in sound-proof rooms, determine the efficiency and silence of every rear axle.

Every Stutz chassis is sent out on the road to test in actual service the performance ability of the product.

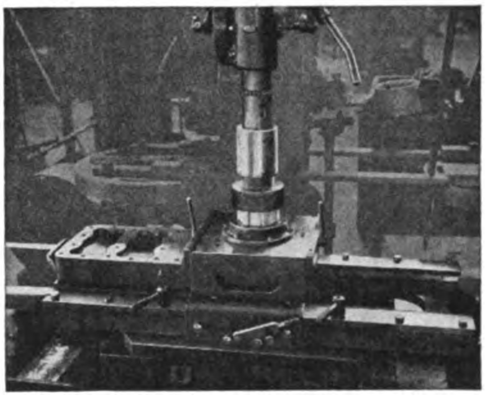
When each car is finished it undergoes a rigid track test at the Indianapolis Motor Speedway, directed by the corps of famous Stutz racing experts.

The final performance of each "D-H" motored Stutz is accurately recorded, and every car bears a certified performance tag to enable its purchaser to know its operating maximums, even though he is never called upon to push the car to its utmost.

The "D-H" motored Stutz is a car with a future—one that offers rich profits for farsighted dealers. We have a special proposition of particular interest at this time. Write or wire for particulars.



The Axometer — a special axle-testing apparatus. Each is installed in a sound-proof room



Machining of parts is carried on extensively. Here we see how combustion chambers are machined

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, *Inc.*
Indianapolis, Indiana, U. S. A.

five wheels, triple spoke, detachable at hub

WIRE WHEELS

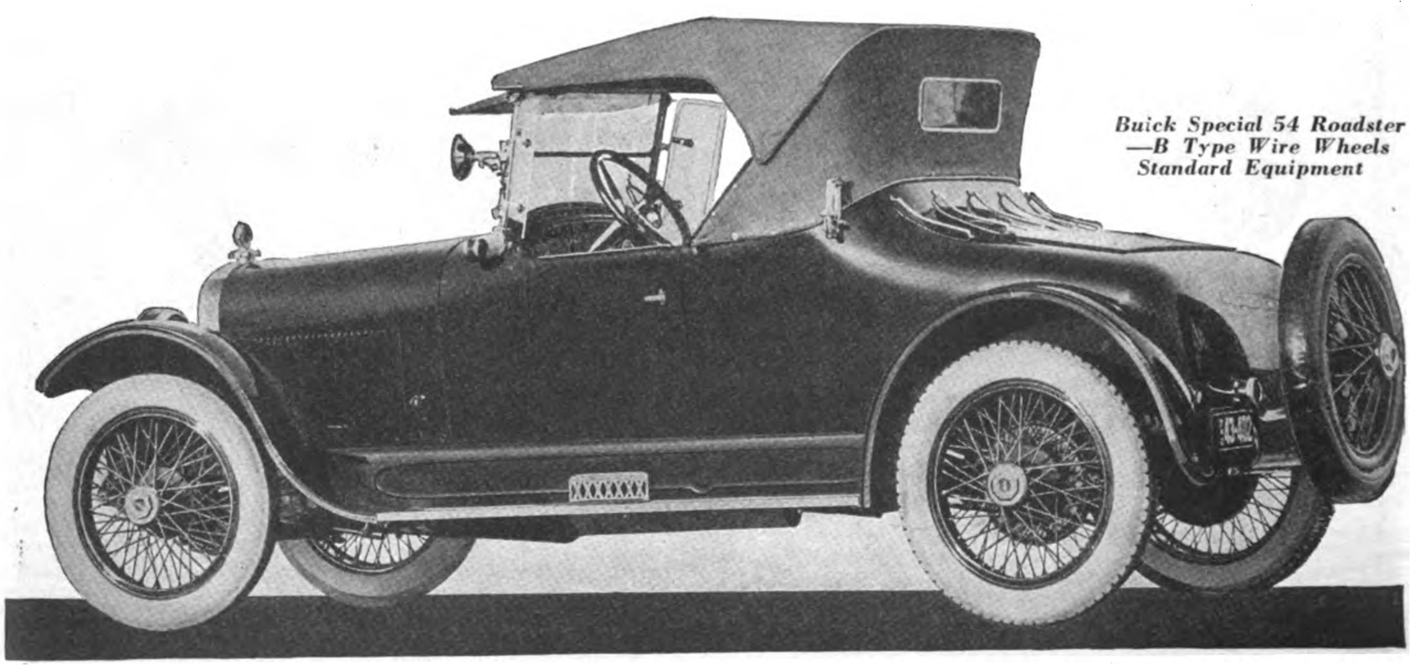
BY selecting WIRE WHEELS for this superb model — the Buick Special 54 Roadster — the designers assured:

Attractive appearance. Easy riding qualities. Quick tire change convenience.

Greater strength and additional safety, due to the TRIPLE spoke construction.

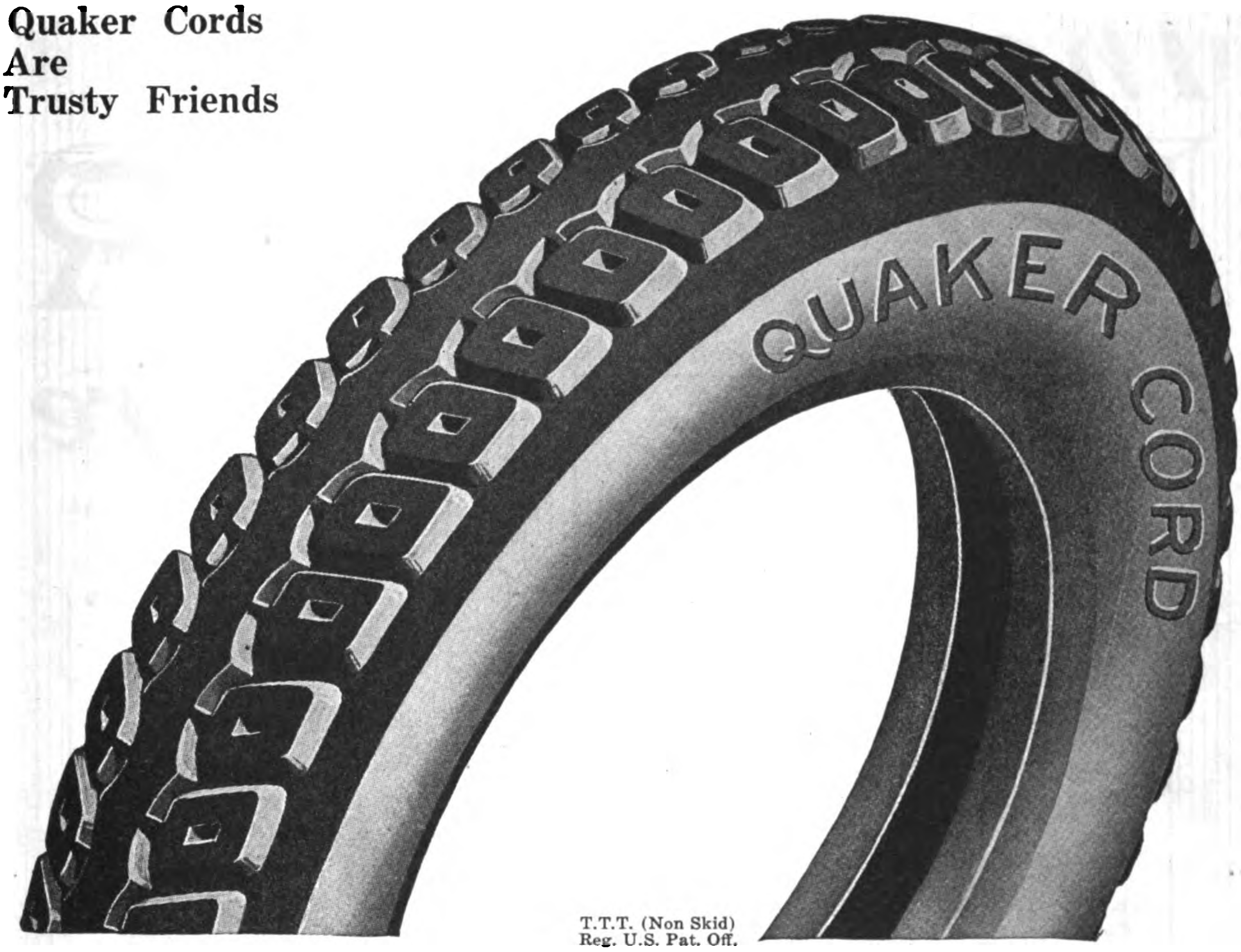
WIRE WHEEL CORPORATION OF AMERICA
(Successor to Houk Manufacturing Co.)
1700 Elmwood Avenue Buffalo, N. Y.

Direct Factory Branches, Distributors and Service Stations in all principal cities.



Buick Special 54 Roadster —B Type Wire Wheels Standard Equipment

Quaker Cords
Are
Trusty Friends



Car Owners Want Mileage
They Get It In Quaker Cords

IF you want to find an enthusiastic tire dealer, ask one who is selling Quaker Cords.

Ask him the reason. He won't talk value only; he will say that never before have his customers been so well satisfied. Dealers soon hear that Quaker Cords are "Miles Cheaper."

If there is no Quaker dealer in your immediate locality, write for our selling proposition at once.

QUAKER CITY RUBBER COMPANY
Established 1885 **Factories—Philadelphia**

TIRE SALES DIVISION
1664 Broadway, New York

Philadelphia 624-26-28 Market St.
Chicago 182 W. Lake St.
Pittsburgh 211 Wood St.
New York 53 Murray St.

Pacific Coast Office, 304 Williams Building, San Francisco

The BADGER *Tire*

Note This List

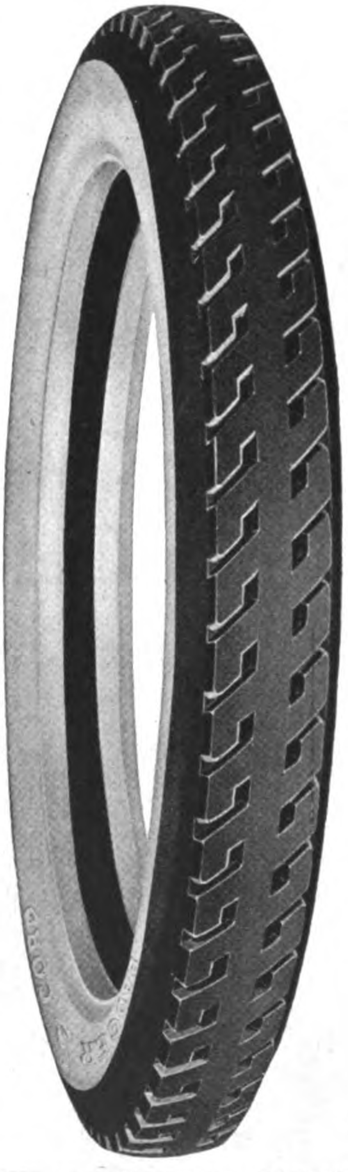
Below is a partial list of the prominent Jobbers who have stocked Badger Tires.

"Nothing succeeds like success," and the exceptionally high quality of Badger Tires naturally attracts the best Jobbers. They can do more business with Badger Tires, because these tires give car owners more mileage and more service:

Julius Andrae & Sons Co.,	Milwaukee, Wis.
Appleby Bros. & Whittaker Co.,	Harrisburg, Pa.
Badger Tire & Rubber Co.,	Spokane, Wash.
Barker, Rose & Clinton Co.,	Elmira, N. Y.
Cook Iron Store Co., - -	Rochester, N. Y.
Thos. P. Deitrick & Co., -	Richmond, Va.
G. W. Dickel Co., - - -	Philadelphia, Pa.
Federal Sales Co., Inc., - -	Buffalo, N. Y.
General Motor Equipment Co.,	Mitchell, S. D.
Griffith & Turner Co., - -	Baltimore, Md.
Hermann-Sanford Co., - -	Springfield, Mo.
Horrocks-Ibbotson Co., - - -	Utica, N. Y.
Chas. Ilfeld Co., - - -	Las Vegas, N. M.
" " "	Albuquerque, N. M.
" " "	Santa Rosa, N. M.
Kelley-How-Thomson Co., -	Duluth, Minn.
Lidgerwood Auto & Machine Co.,	Lidgerwood, N. D.
C. M. McClung & Co., - -	Knoxville, Tenn.
Motor Hdwe. & Equip. Co., - -	San Diego, Cal.
Norfolk Motor Equipment Corp.,	Norfolk, Va.
Rapides Auto Co., Inc., - - -	Alexandria, La.
Ross-Frazer Iron Co., - - -	St. Joseph, Mo.
Roy & Titcomb, - - - - - -	Nogales, Ariz.
Schwabacher Hdwe. Co., - - - -	Seattle, Wash.
Stewart Wholesale Co., - - - -	Boise, Idaho
Watertown Motor Accessories Co.,	Watertown, S. D.
Wetmore-Savage Co., - - - - -	Boston, Mass.
Arkansas Dry Goods Co., -	Batesville, Ark.
Purcell Wholesale Grocery, -	Purcell, Okla.

The Badger Rubber Works

Milwaukee, Wisconsin



Importance of Generator Cut-Out

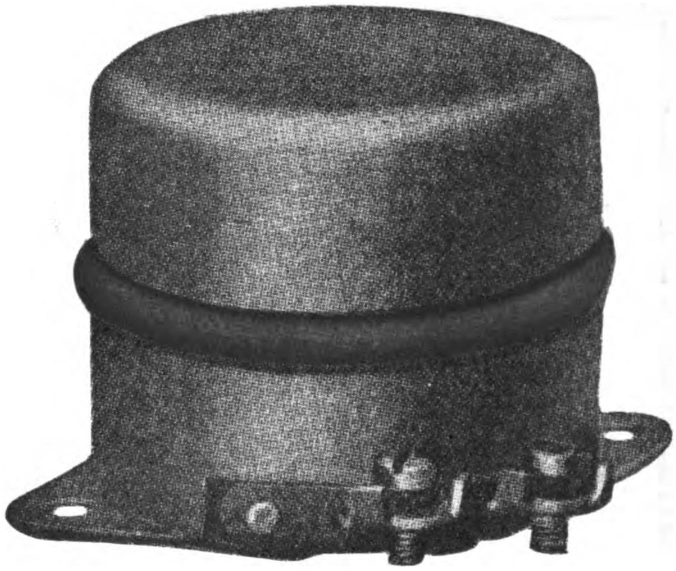
RED RIDGE

A chain is no stronger than its weakest link:—

An electrical system is no more certain of effective function than its generator cut-out relay.

This fact is indisputable! Why not use the best possible relay?

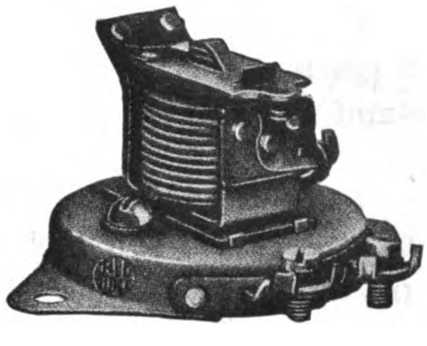
Extensive research and endless experimenting by our competent engineers has developed the popular **RED RIDGE** generator cut-out relay that is used throughout the land by the most critical operators in the automotive industry.



Half-way methods can only produce half-way results.

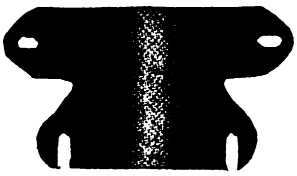
Why not use the best?

THE RED RIDGE Cut-Out Solves the Problem



Guarantee and Tests

We safeguard each instrument from the inception of construction to completion by six rigid tests and is consequently guaranteed to make good or we will.



Vital Advantages of the RED RIDGE Cut-Out

All of the wire used in its construction is first enameled, baked and then cotton covered.

The shunt (inside core) has a varnished cambric covering between each layer of wire.

Only pure silver oversized contacts are used.

The adjustable base plate makes the instrument adaptable for either generator or dash mounting. This convenience will appeal, where replacement is necessary on the Ford generator.

This combination of salient features makes the RED RIDGE cut-out the most desirable instrument for standard equipment and replacement purposes.

Sample and Literature Sent Upon Request

LIST PRICE COMPLETE WITH ADJUSTABLE BASE PLATE
on 6 VOLT TYPE $2.25
on 12 VOLT TYPE $2.50

Eastern Parts Manufacturing Co., Inc.

135 Spring St. NEW YORK CITY

REO

Every Performer A Star

Every model in the Reo line is a top-notcher—every performer a star.

No weak spots in the Reo program—no models to be carried along and bolstered up by stronger ones.

Each has its own particular place to fill in the range of motoring needs—and fills it—and is a money maker for the Reo dealer

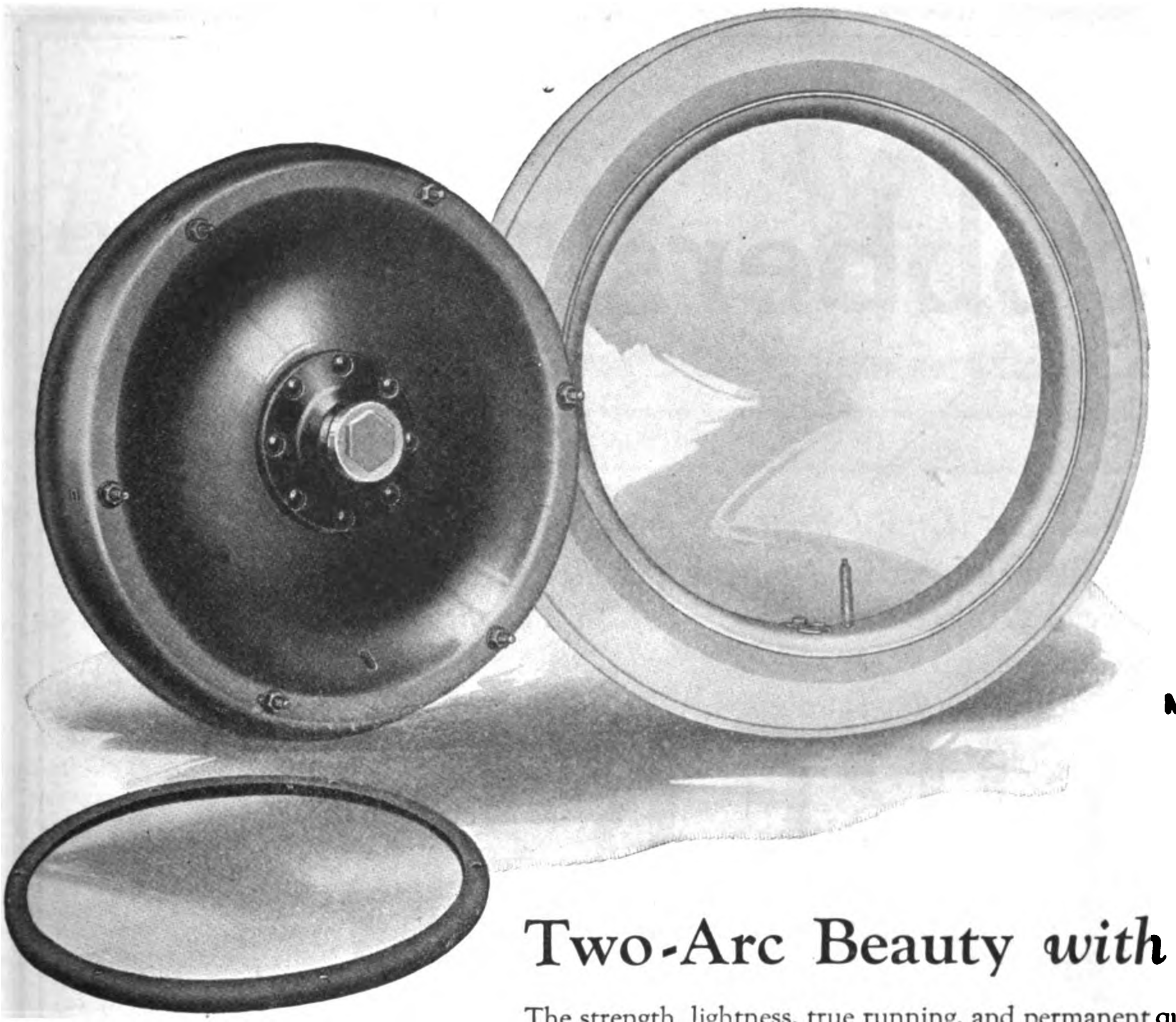
No duplication of models—one model for one kind of service—with a model for every kind—is the Reo way.

Reo all-star line comprises: 7-Passenger Touring; 3-Passenger Roadster; New Business Coupe; 4-Passenger Coupe; New Six Sedan; New Taxicab Chassis; and that mighty Speed Wagon "that fits every business."

Better have full particulars concerning yourself and your territory on file with our Sales Department in case Reo representation in your territory should become open. Then you will be in line for consideration.

Reo Motor Car Company, Lansing, Michigan

Los Angeles, Cor. 12th and Hope Sts. San Francisco, 1730 Van Ness Ave.



Motor Wheel PRODUCTS

Two-Arc Beauty *with* Utility

The strength, lightness, true running, and permanent quiet of Tuarc Steel Wheels require the *one piece* construction of the Tuarc disc and felloe.

This ingeniously developed integral stamping exemplifies Tuarc designing and manufacturing ability.

Great as is the claim to beauty of the Tuarc double curve, this original Tuarc construction requires no compromise with wheel utility—

It was Tuarc design which made possible the outside valve stem—

Tires on Tuarc wheels are changed by the common sense demountable rim method, saving Tuarc users the cost of an extra wheel, and the cost and trouble of adapting a new carrier for spares—

Tuarc hubs, without extra parts, fit the car for which the wheels are intended—no delay or extra expense—you can close sales quickly.

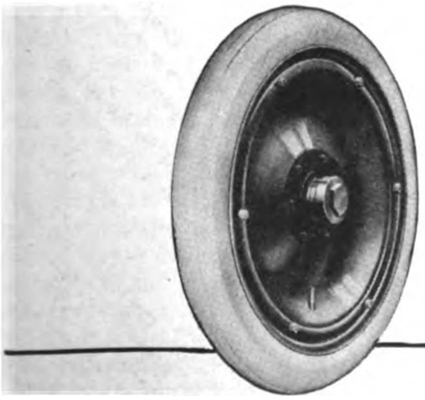
The valuable Tuarc selling franchise may be open in your territory. Write at once.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

MOTORS, EQUIPMENT & TRACTOR CO.
1341 So. Hope St.
Los Angeles, Calif.

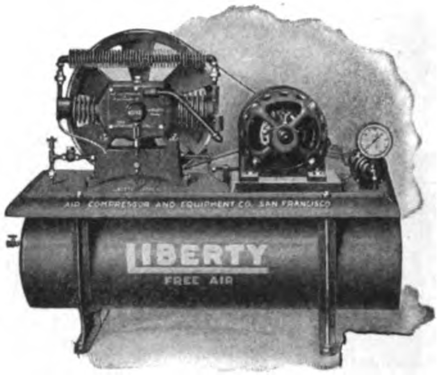
WILL E. WALLACE
520-37 Van Ness Avenue
San Francisco, Calif.



Gier Tuarc

STEEL WHEELS

—a Motor Wheel Product



Jobbers!

Over Six Million Dollars' worth of Air Compressor Equipment was sold on the Pacific Coast last year! Are YOU getting a share of the profits from this business?

LIBERTY
AIR COMPRESSORS

Manufactured on the
Pacific Coast

Pacific Coast Jobbers who are on the job, alert, and real "go-getters" have the opportunity to cash in on one of the biggest selling propositions in the country—a product for which there is an ever increasing demand. Liberty Air Compressors are manufactured on the Pacific Coast for Pacific Coast use! During last year over Six Million Dollars was spent for Air Compressor Equipment on the Pacific Coast—and live jobbers have an opportunity to share in the profits from this steadily rising amount! Liberty Air Compressors have been and are being purchased by the United States Government, and such prominent corporations as Union Oil Company, the Associated Oil Company, the Pacific Gas and Electric Company, the Great Western Power Company, and a long list of others equally prominent as purchasers of high grade equipment. WRITE US—use the coupon, if you wish—and tell us if you are ready to plunge in for some of the profits from the Air Compressor game. We want to hear from firms who are "go-getters," and who are willing to go out and PROVE IT!

AIR COMPRESSOR & EQUIPMENT CO.

46-48-50 Natoma St., San Francisco

504 South San Pedro St.
Los Angeles

Mail at Once for Attractive Dealer Proposition

Air Compressor and Equipment Company,
San Francisco, California.
Gentlemen: We're interested in knowing all
aboutyour Air Compressor proposition.

Jobber's Name ....

Address ....
Handling the following lines
at present ....

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 2 MAY 1, 1922 $3.00 PER YEAR

MANY CARS USED ON EASTER MORN

A Bit of Sunrise Service Description Which Reveals What a Great Factor Motor Transportation Is.

In a number of impressive spots, notably in Southern California, sunrise services were held on Easter morn, April 16. This annual custom was inaugurated years ago on Mount Rubidoux, near Riverside, by Jacob Riis, nature lover and friend of Roosevelt, and its wonderful development there and elsewhere unquestionably is due mostly to motor transportation. The masses of motor cars near any one of the various services, in the dim early hours, look "like all there are in the world"—really an astonishing sight. Their importance is indicated in the following reprint of part of one report, by John Gray in the Los Angeles Examiner. Gray, referring to the Rubidoux affair in an eloquent preliminary, goes on to say:

—

Three o'clock in the morning found a steady stream of cars up the narrow road of many sharp turns. Off toward Los Angeles the lights were a chain of jewels. The immensity of the crowd which later was to appear could only be guessed from these unending processions coming from everywhere.

At this hour the chimes, deep throated and resonant, sounded from a point high up among the rocks, preparing the devout for the supreme hour and lifting up the spirit upon the wings of hymns as eternal as the mountain over which their cadence fell.

A single electric light flooded the cross, white and radiant and visible for miles. Some distance below this symbol, which has come to stand for the resurrection, a large area had been enclosed with fronds of palms. The choir of some two or three thousand voices was ranged in the seats cut from the rock. A small pulpit took up the middle, and behind and before these principal actors in the sacred drama were the multitude, hundreds who had not secured standing room spreading over and clinging to the rocks.

It was cold, and to many it may have been tiresome, these long hours of waiting—a commentary on the perennial magic of the story of the Resurrection, which covers this mountain with pilgrims more thickly every year.

Cold? Yes. But one of the Boy Scouts, who lined the roadways as monitors of traffic, didn't mind it. He rubbed his eyes, tried gallantly to endure, and then lay down and curled up in the crevice of two rocks, with his shaggy head against one of them. The middle aged were stamping about to keep their feet from freezing, but he was as cozy as a baby in its crib.

The 701 automobiles which passed through the Mount Rubidoux control exceeded last year's number 15 per cent. It was estimated 16,000 persons, mostly pedestrians, swarmed on the hillside rocks. All through the night, electrical chimes pealed Easter hymns out across the valley.

From all parts of the Bay District, including San Francisco, people flocked to Sausalito and to the top of Mount Tamalpais, to sing and see the sun rise on Easter morning.

"Look out before driving in," says a garage sign.

Get your car repaired now.

AS TO YOUR MAIL.

Coming to the Coast? Don't know where to have your mail sent? Send it care of Motor West, at 911 Marsh-Strong Building, Los Angeles, or at 815 Gillette Building, San Francisco. You can get it at either address, personally or by sending forwarding instructions, by mail, phone or otherwise.

BREAKING RECORDS TOWARD THE NORTH

Runs by Amateurs From San Francisco and Los Angeles to Portland Being Made Interestingly Fast.

When minions of the law will take notice is a matter for the future. Meantime, shattering records on the run from California to Portland has become a regular pastime with amateur drivers, and with the full advent of spring new times have been made from San Francisco and Los Angeles that may get professional pilots interested.

The San Francisco-Portland record has been smashed by Lynn Hockensmith and Benjamin K. Koe, both of Astoria, in a Dort car in 25 hours 51 minutes elapsed time. Koe, owner of the car, is a young Chinese merchant of Astoria. He and Hockensmith, who did the driving, had made a trip to San Francisco for pleasure and when they got ready to start back they decided to try for a record. They were checked out of San Francisco and into Portland by the Western Union.

Something new in the way of a record for a run from Los Angeles for amateur drivers to shoot at was hung up by W. H. Cullers, wealthy business man of Portland, accompanied by W. F. McKenney of Portland, prominent business and club man and formerly ruler of the Portland chapter of Elks. The trip of more than 1000 miles was made in Cullers' Pierce-Arrow in 59 hours 45 minutes, elapsed time. The men left Los Angeles at 8:45 a. m. on a Sunday and reached Sacramento at 10:30 p. m.; left there at 8 a. m. Monday and reached Ashland, Ore., at 11 p. m.; left Ashland at 8:15 a. m. Tuesday and arrived in Portland at 8:30 p. m. The best thing about this run was the fact that the men were not out for record; merely hurried home. The roads throughout were good.

ECONOMY RUN IS ABSORBING TOPIC

Seventh Annual Trip from Los Angeles to Camp Curry in Yosemite Means a Great Deal to Trade Men.

The outlook is for a large entry for the seventh annual economy run for dealers' cars, May 12-13, Los Angeles to Camp Curry, in Yosemite National Park. Distance is stated to approximate 364 miles. Last year it was 398. Trophies have been bought by J. A. C. Waters, manager of the Camp Curry office in Los Angeles. Not the trophies, but what they stand for, will be of intense interest to trade men, especially manufacturers and their engineers.

Request for sanction is in the American Automobile Association's hands. Its Los Angeles representative, George F. Stephenson, drew up the rules, as he had for all the previous runs. The run will be managed again by H. F. Weller.

Last year there were four classes. This time there will be five, due to complaints that 6 cylinder cars have had to compete against fours—though several times sixes have won in their classes against fours. The five classes will be:

1-E—Cars of 4 cylinders, 1922 model, $800 and under, factory.
2-E—Cars of 4 cylinders, 1922 model, $801 to $1200, factory.
3-E—Cars of 4 cylinders, 1922 model, $1201 to $3000, factory.
4-E—Cars of 6 or 8 cylinders, 1922 model, $1001 to $3000, factory.
5-E—Cars of 4, 6, 8, or 12 cylinders, 1922 model, $3001 and over, factory.

In addition to these five classes, there will be the usual sweepstakes for the car, regardless of class, making the best showing on ton miles per gallon of gasoline. The ton mileage is determined as follows:

Total weight of car (and load), in tons, times the number of miles driven (approximately 364 miles), divided by the number of gallons of gasoline consumed, which equals ton miles per gallon of gasoline.

No entry fee is charged in this event, which, however, is limited in its eligibility to cars which are at the time of entry the property of established automobile dealers of Los Angeles.

The first day's run will be to Fresno, with cars leaving starting point in Los Angeles at 1 minute intervals after 7 a. m., and with a time limit of 10 hours to the control at Fresno. The run next day to Camp Curry will be made so that contestants will arrive some time Saturday afternoon, May 13. The limit has been set at 6 p. m.

All entries must be in the hands of J. A. C. Waters, 732 South Spring St., not later than 6 o'clock p. m., Saturday, May 6.

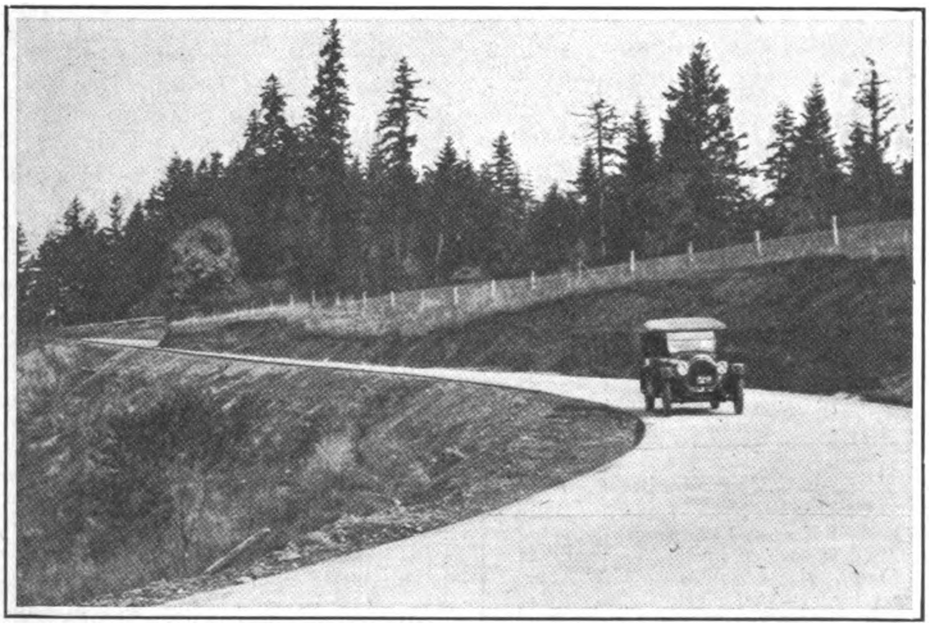
The event will be a week later this year than last, Open Road Week, May 1-6, being the reason. Last year there were 21 entries, and despite road conditions all but one checked in on the floor of Yosemite Valley within the time limit, the exception blowing out a cylinder head gasket when within a few miles of Inspiration Point.

The first car started at 7 a. m., May 6. Before the cars reached Los Angeles' outskirts wet roads were encountered. Some met a biting snow storm at Lebec, on the Ridge Route, which was so slippery that some cars turned around, or skidded on the hairpins—no accidents, however. There was "weather" till the caravan had gone through Tejon Pass and reached Bakersfield, some ways beyond in San Joaquin Valley. Merced, night control, 294 miles, was reached by all within the 12 hours elapsed time limit. None needed the 55 minutes allowance for a bad detour south of Bakersfield.

Next day's distance, Merced to Yosemite, was 104 miles. A heavy rain on May 6 had made the road a sea of slushy gum.

Last year's sweepstakes was won by a Templar, winner in class 3-E, which went through without chains and averaged 26.66 miles per gallon of gas, using 15 gallons of gasoline, 1 pint of oil and half a quart of water. A Saxon Duplex won in class 2-E, averaging 25.19 miles per gallon, using 15⅞ gallons of gas, 3 pints of oil, 1½ quarts of water. A Gardner won in class 1-E, averaging 23.50 miles per gallon, using 17 gallons of gas, 6 pints of oil, 11½ quarts of water. A Dorris six won in class 4-E, averaging 17 miles per gallon, using 23½ gallons of gas, 2 pints of oil, 1 quart of water.

Fresno dealers will hold a sociability run to Yosemite on May 12. San Francisco news is that a number of trade men from the Bay City also will be on hand at the finish to greet the contestants. Whether radio bulletins will be received at Camp Curry, telling of the progress of the contestants, has not been stated.



ONE OF SEVERAL SECTIONS OF NEW PAVEMENT ON PACIFIC HIGHWAY.
As a result of 1921 construction in Oregon, from the Washington line to California's northern boundary Pacific Highway now is paved except about 50 miles. By this year's end every mile will be paved. The picture was taken south of Salem.

Ford Faithful Patents Upheld.

In the February term of the United States district court of Southern California an injunction was issued against the distributors of the Safety oiling system as an infringement of the rights of the Ford Faithful oiling system and giving W. O. Thompson judgment for damages.

With a clear field for its product, now recognized as necessary for efficient service, and with a national advertising campaign to Ford owners, dealers will soon be doing a tremendous business in this oiling system, it is believed by W. O. Thompson Mfg. Co., Pasadena, Calif., the manufacturer.

Palm Canyon Bill Progresses.

Late news is that the bill authorizing making Palm Canyon and adjacent lands in Southern California a national monument, which passed the House, has been reported favorably by the Senate committee.

THE FIVE WHO COMPLETED THE 150 MILE SAN CARLOS RACE. THREE OTHERS WERE FLAGGED.

HARRY HARTZ.

JIMMIE MURPHY.

ROSCOE SARLES.

ART KLEIN.

JOE THOMAS.

HARRY HARTZ WINS SAN CARLOS EVENT

Eight Start, Five Complete 150 Miles, Three Flagged but Paid—Paragraphs on Race and a Situation.

HARRY Hartz, Duesenberg, won his first big race, the 150 mile Golden Gate Motor Derby on the 1¼ mile board track at San Carlos, Calif., April 16, in 1:21:58.60, averaging 109.80 miles per hour.

Jimmie Murphy, Duesenberg, was second. He was winner of the December 11 race at San Carlos, 250 miles, in which he averaged 109.58 miles an hour.

Roscoe Sarles, Duesenberg, was third; Art Klein, Frontenac, fourth; Joe Thomas, Duesenberg, fifth.

Jerry Wanderlich, flagged at 148 miles, was given sixth money; Frank Elliott, flagged at 137 miles, seventh; Peter De Paolo, flagged at 114 miles, eighth.

Thus all of the 8 starters were accounted for at the finish. The starters, their mechanicians and machines were:

Thomas—Nielsen	Duesenberg
Sarles—Olson	Duesenberg
Murphy—Olson	Duesenberg
Elliott—McKee	Leach
Klein—McAllister	Frontenac
De Paolo—Franck	Duesenberg
Hartz—Fengler	Duesenberg
Wanderlich—Butler	Duesenberg

Milton and Miller had entered but did not start. Nordluch and Crosby did not qualify. The contestants stood as follows at the 5-mile points:

Hartz was in the actual, though not always apparent, lead at each 5 miles through the race.

Thomas was second at 5 miles, then dropped to the tail end, was seventh from 20 to 40, sixth to 50, fifth to the finish.

Elliott was third every 5 miles to 40, fifth to 50, sixth to 80, seventh to 135, and at the finish was flagged in his 137th mile.

Sarles, fourth at 5-mile points to 40, moved then to third and was there at all 5-mile stations to the end.

Murphy, fifth at 5 miles, was second in time at 10 and all the way. At the end, Hartz led him by a lap, though they gave the crowd a thrilling finish.

Klein, sixth at 5 miles, was fifth to 40 and fourth to the finish.

Wanderlich, seventh at 5 miles, was sixth at 10 and 15, tail-ender to 40, up one position to seventh at 45, still there at 80, and sixth till the flag fell for him at his 148th mile.

De Paolo was tail-ender at 5 miles, seventh at 10 and 15, sixth at 20 to 40, eighth again at 45, and there till 'twas all over, in his 114th mile.

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The pit stops, and who made 'em, and why:

Thomas, in his 5th lap (6¼ miles), for a left front tire.

Wanderlich, in his 15th lap (18¾ miles), for a right rear tire.

De Paolo, in his 32d lap (40 miles), motor trouble.

Elliott, in his 34th lap (42½ miles), to examine steering knuckle and wheels, after a slide the hard wind made him take in his 32d lap.

The pits were not visited again except by De Paolo, who in his 45th lap (56¼ miles) had an indisposed motor; in his 74th (92½ miles) needed water; in his 88th (110 miles) had more motor trouble, and more of the same in his next lap.

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When Manning dropped the flag, Joe Thomas took the lead, Hartz took second position, Sarles was third, Murphy near the rear. In the next lap Hartz went up ahead. Murphy moved up after the fifth lap to second and, as told, held that position in time all the way, and the position of wind-jammer much of the way. Murphy is a San Francisco lad, and Bay City hopes hopped upward when, at 21 laps, he began to close on Hartz. Elliott, in third position, advanced also, but later dropped back. In his 89th lap Hartz, then leading Murphy by a lap and a few yards, threw part of the tread of his rear right tire, but did not go to his pit. He allowed Murphy to take the apparent lead in the 104th lap and kept in Jimmie's tow till his final lap, when he sprinted ahead in front of the grandstand.

So went the race between the leaders. The crowd watched that most.

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Before the race there was some stock car speed. Earl Cooper drove a Paige 6-66 Daytona speedster, carrying a passenger, 10 miles in 6:26.20 (93.23 miles per hour), breaking stock car record, stated to be 6:31.48 (90.80 miles per hour). Cooper is said to have done his fastest lap at 94.80 per hour. President Jewett, of Paige-Detroit Motor Car Co., was present.

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That was not all. Bill Yeager, who wrote up the doings for the San Francisco Examiner, described the other pre-race presentation as "a bevy of fashionable show beauties who braved the wind and gave the boys a gander at the latest hold-up the wife is about to spring." Leon J. Pinkson, of the Chronicle, used more elegant persiflage, thus: "As an extra attraction for the Eastern crowd that filled the grandstand, the management staged a very attractive fashion show. Scores of mannikins, probably more than ever have been gathered together at a single exhibition, paraded on a specially built platform and showed off many new creations to perfection." It was an Easter Sunday show; and not all who gazed were Easterners.

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Hartz took a chance with that frazzled tire that not all track officials would stand for. His mechanician signalled for a change but Harry evidently was unwilling to lose the lap he had on the Irishman. The crowd held its breath, expecting a blowout.

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Murphy waged a plucky battle. Pacing, in that wind, was something terrific; and only seven of his eight cylinders were hitting for nearly 100 miles. When he was not pacing, he was pressing on, despite the danger of Hartz' tire exploding in front of him.

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Hartz was not the only one who "drove all over the track." Art Klein said the wind made him do ditto. Asked about Hartz going on when his tire began to peel, with 31 laps to go, Klein said that with Murphy as close to the lead as he was, he, Klein, would have kept going as Hartz did.

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Klein was glad to be rid of the jinx which has been bothering him; glad he actually had gone through a complete race, even if he had to finish fourth.

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In a large picture entitled "Just Before the Battle," the San Francisco Bulletin showed the field of contestants swinging into the straight toward the tape—but the engraver had them speeding opposite to the usual direction.

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In addition to doing a kelly in his 32d lap, Elliott's car came near being crashed into when, in his 93d, Hartz, with whom Murphy was trying to play tag, swung into the first turn just after Elliott had done so. That was soon after Hartz, in his 89th lap, had begun to lose rubber.

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Hartz and Harlan Fengler, his mechanician, are youngsters in both age and humor. Fengler, moreover, is an Adonis of the who-cares-a-whoop kind. He tried to get the goat of the Mur-
y-Olson crew, and certainly got the
of the crowd, during the ten min-
r so that he kept pointing to the
ng rear tire on Hartz' car.
it was in fun or warning was
Murphy took the lead in
ap.

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reporters for prominent
m to have grabbed any
way of average speeds,
l or both. One put
hour. Better

hy, $3000;
$1333.33;
, $133.33;
Elliott, $833.33; De Paolo, $833.33. Those amounts total $15,299.98. Money was provided for 12 finishers, but only 8 started and three of them were given the curtain flag without having to do the 150 miles.

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A. A. A. championship points: Hartz, 300; Murphy, 160; Sarles, 90; Klein, 50; Thomas, 30; Wanderlich, 20; Elliott, 15; De Paolo, 10.

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It is said that on the homestretch the speed sometimes was 120 per. Not unlikely. The wind helped there.

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Possible afterthought by Murphy: The difference between 8 cylinders hitting, and 7, is only 12½ per cent, but the chasm between $5000 and $3000 is 33 1/3 per cent; a hole the size of $2000.

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After the race was over, Hartz' car acquired a crooked frame and axle just after leaving the track for its garage in San Mateo. Harlan Fengler, Hartz' right kick, was driving. He crossed the railroad track, swerved across the road to miss an approaching car, and got bumped by a Chevrolet driven by a woman.

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The wind affected not only the crowd, but made the race one of the stiffest of the season. It almost caused Elliott a serious accident in his 32d lap, and bothered all the others.

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The wind played havoc with the score board, which had cloth numbers instead of stiff card ones, making it almost impossible for the men in charge to operate, and equally difficult for spectators to note positions.

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In spite of the wind, the time was almost uniform throughout. The time was given only at three points—50 miles, 27:08, average 109 per hour; 100 miles, 54:17, average 109; and the average at the end, 109.80.

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E. H. Pendleton did the timing and scoring. Handling these very important functions of an automobile race is very difficult. The inside, low-down fact is that mixups are customary and take time to straighten out. Motor West's data on this race, however, was obtained by the same accurate method which enabled the contestants in the recent Los Angeles event to be paid their winnings the day after it was run—something to make even Indianapolis sit up and take notice.

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A much more important function than most people appreciate is that of starter, who, if he is on the job, also is clerk of the course—often referee de facto, as well. Les Manning, of Oakland, who is a state motor vehicle department inspector and who has had some starting experience, had the onery task this time. For some reason the San Francisco newspaper men called "Page Fred Wagner" whenever Les went by the press box.

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Jim Corbett, the man who shook the heavy frame of John L. Sullivan and took the pugilistic championship from him, many years ago in Louisiana, was entitled referee and played the part graciously, greeting old friends in the grandstand. Otherwise, he seemed pleased to let Les do it.

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General admission, including infield, was $1.50; including unreserved grandstand seat, $2.50; with reserved seat, $4 and $5.

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An important circumstance was the presence of Tommy Milton as a spectator, and part of the time as an adviser in Harry Hartz' pit. The explanation given of Milton's not racing was that the American Automobile Association's contest board chairman, William Schimpf, who suspended Milton's car recently, had stated Milton could drive it if he would enter it as a Milton special until the ban on it as a Durant special is lifted; but that this did not suit R. C. Durant, its owner.

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Motor West is not digging below the surface in the matter, but it appears the alleged "erroneous" advertising which led to the Milton suspension—a printed statement that after the recent Los Angeles race Milton would appear only at San Carlos on the Coast before going to Indianapolis—is laid at the door of the San Carlos management. Fresno noticed it, and the suspension followed. Milton is quoted as saying he noticed it, too, and protested against such "advertising," but he could not do more. He is said to have denied flatly having demanded a bonus from Fresno.

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More "erroneous advertising" accredited to the San Carlos publicity man is said to have been that Ralph Mulford, Dario Resta and the new Frontenac car would compete in the April 16 race.

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Not much stock is taken in the rumor that an additional reason for the A. A. A. action as to Milton was alleged squeezing of Bordino by him and perhaps others in the recent Los Angeles race. One official observer said several pilots tried to do that, but it was not obvious to the Motor West man. It appeared that, added to the proved high speed of Bordino's car, there always was space in front of him when he drove wide, which he did repeatedly, as one naturally must do to get by a string of others.

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To the mulligatawney involving Milton, with the San Carlos management indicated as having put "erroneous advertising" tabasco in the soup, is added the statement that President Morton, of the Greater San Francisco Speedway Association, asked the A. A. A. to suspend its official starter, Fred J. Wagner, of New York but now on the Coast; that De Palma be suspended also, and that Eddie Miller be disciplined for entering at San Carlos but not starting.

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It is alleged that Wagner and De Palma whispered bad tales about the San Carlos management to sundry pilots, and that Sarles is willing to make affidavit, as one of them, to that effect. It is made to appear that several pilots listened to the whispers and that they then started nevertheless and that De Palma said they had double-crossed him. This is the first time De Palma has been represented as anything but a true sportsman.

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As for Wagner, he was quoted at Fresno as terming the charges absurd; that he was inclined to believe the story a hoax; but that "in any case I welcome any investigation of the facts leading up to certain developments of speedway control on the Pacific Coast during the past few months." Cryptic remark, to many. Not to some, who say that should the developments become thoroughly fermented and blow up, certain speedway control will not be the same as it is now.

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In Wagner's favor is his indicating to Jim Houlihan, automobile editor of the Oakland Tribune, before he had any inkling of the charges, that he had urged several men, who were using dilatory tactics, to send in their entries for the San Carlos race, though he would not be starter there.

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Houlihan retold, as being related to a mutual lack of admiration between Starter Wagner and Bill Pickens, San Carlos manager, the story of how the latter, years ago, in publicity concerning an outlaw race at Sheepshead Bay, New York City, announced "Fred J. Wagner" would be starter, the Wagner turning out to be not the famous one but a chap whom Pickens had located through the New York telephone directory.

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In Santa Rosa another angle—the Cotati angle—on the situation is that several drivers, presumably including some who competed, had refused to race at San Carlos because a San Carlos official broke faith with them; treated them unfairly. About what, is not stated.

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What's bubbling in the cauldron may possibly simmer down, and cool; and where good purses are, there racing men like to go; but one swat leads to another, and issues get mixed, and a battle royal ensues, and good fields of entrants may be prevented; and if so all concerned would be losers. Verbum sat sapienti; and the sooner the sapienti take hold and straighten it all out, the less chance sapheads will have to stir the soup.

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Not all of the former are in the East, nor all of the latter on this Coast. Investigating well before suspending is fair, and good policy. Environment should be considered. This is a long way for an A. A. A. contest chairman to see all the points clearly at a glance. A former one even failed to see well when he came to the Coast himself, and made a remark about a locality, that was magnified and did the A. A. A. not a bit of good.

Prince Track for Kansas City.

Jack Prince, builder of fast speedways, left San Francisco on the 17th, for Kansas City, where they are all ready to start work on a 1½ mile track. According to Jack it will be capable of holding cars at the rate of 120 miles an hour. The site has been selected and if the necessary arrangements can be made a meet will be held on or about June 15.

Prince also has calls from capitalists in New York who wish to build a speedway at Newark, N. J., as well as another in Detroit.

These, together with the one proposed for San Diego and those already in operation, will make a total that, Jack and others say, should interest moneyed interests in the building and operation of some new cars. This, in fact, is absolutely essential to the future success of racing, evidenced by the interest created by Bordino's Fiat at Los Angeles. So says Jack, and so say others.

Tientsin district, China, population 3,000,000, has only about 1000 passenger cars and 30 motor trucks, mostly of American make.

To Revive Racing in Oregon.

For the first time in several years Oregon will have A. A. A.-sanctioned racing this spring, according to arrangements concluded recently with Frank Watkins, Oregon representative of the A. A. A. contest board, and the directors of the state fair grounds at Salem, where the races will be run on Saturday, June 3. The program is in the hands of two veteran dirt track racers, Gus Duray and J. Eddie Hickey.

Dealers' stock car races will be included and keen interest is being manifested by Portland and Salem trade men. Two races are planned, one for cars of 300 cubic inches displacement, or less, and one for larger-motored cars. Both races will be for 10 miles, and a third race, 15 miles, will be run by the winners of the two preliminaries. In addition there will be a group of professional races and a motorcycle race. The event is hoped by many to presage the erection of a speedway somewhere in the vicinity of Portland.

A. A. A. Man for Each Track.

The A. A. A. contest board has made a new ruling which provides for a contest board member for each of the several tracks on the Coast. D. V. Nicholson is to act at San Carlos, D. J. Lafferty at Cotati, J. V. Smith at Los Angeles, Fresno's representative has not been appointed yet. E. F. Cheffins, formerly A. A. A. contest board representative for the Northern California district, and who has been active in racing affairs on the Coast for the past ten years, has resigned. He was instrumental in the building of the Cotati and San Carlos speedways and leaves a host of friends among the promoters, drivers and patrons of automobile racing.

Tacoma Race Sanctioned.

Sanction by the A. A. A. contest board for the eleventh annual race on the Tacoma speedway has been received by Walter Baldwin, president of Tacoma Speedway Association. The 1922 purse will total $25,000, to be split ten ways, he announces. First prize is $10,000, second $5000, third $3000, fourth $1750, fifth $1500, sixth $1250, seventh $1000, eighth $750, ninth $500, and tenth $250. Entry blanks have been mailed to the various drivers who lately have been adding to their reputations on California tracks.

Washington Gas Tax Piles Up.

Returns from Washington's gasoline tax in March totaled $58,403, which exceeded February by $10,000 and made the grand total for the 9 months period of the tax $627,407.

JIMMY MURPHY IS VICTOR AT FRESNO

Two-Lap Lead in 150 Mile Nonstop Is Bay City Lad's First Win Since He Landed the Gr-raw Pr-ree.

On April 27, Raisin Day in Fresno, with Douglas Fairbanks 'n' everybody present, Jimmie Murphy, Duesenberg, raised the record of the mile board track to 102.85 miles per hour. Previous record was 100.77, by Earl Cooper, Duesenberg, October 1, 1921.

Murphy led from start to finish, winning in 1:27:30.48, nonstop; two laps in the lead.

Frank Elliott, Leach, was second; Harry Hartz, Duesenberg, third; Art Klein, Frontenac, fourth; Pietro Bordino, Fiat, fifth.

Complete report not being received in time for this issue, prevents describing the race in detail; but it was a great day in Fresno; a great and joyous crowd was there from many cities, towns and ranches in vast and prosperous San Joaquin Valley, as well as from San Francisco, Los Angeles and other chief Coast centers; and an estimated 40,000 persons saw a splendid contest, between a set of automobile greyhounds typifying the swift, graceful, compact and powerful design that, tested on tracks, is becoming prevalent in everyday motor vehicle use.

As the Raisin Day Classic neared the halfway point, Sarles was moving toward the front at about 100 yards a lap, but in his 53d mile a right rear tire change put him back.

The fact that Frank Elliott's Leach was second and ahead of Hartz' Duesenberg, speaks a bookful for the all-California-product.

Art Klein, Frontenac, finishing fourth, as he did at San Carlos on April 16, gave his w. k. and long-persistent jinx another good shove into limbo.

For Bordino, Fiat, who was fifth, there was much admiration. He does no tricks and is out to do all he can do with speed. His machine has oodles of that quality and is built like a watch; but still, too heavy a watch. No doubt that was what made each of his whirls at the turns a skidding adventure. His car went like the wind in the stretches. Bordino covered 115 miles without a stop. Then he had to change both rear tires; and toward the finish he had motor trouble. On the Cotati 1¼ mile oval, May 7, he may do much better.

Joe Thomas finished last. Then he was rushed to a hospital, with an operation for appendicitis, preventing him from racing at Cotati or Indianapolis, a strong prospect. He was in intense pain almost throughout the Fresno race.

If Thomas is operated upon, perhaps Cooper will use his Duesenberg at Cotati. The veteran is being dubbed the Come Back Kid. On April 16 he broke world's stock car record at San Carlos. It was with Thomas' Duesenberg, October 1 last year, that he broke Thomas' Fresno track record, nosing out Murphy in a hot trip to the tape.

De Paolo blew a rear tire on a turn in his 98th lap, but held the helm through a dangerous appearing series of weaves up and down the slope, and went to his pit. The huge crowd praised the skill of Ralph De Palma's nervy nephew.

De Palma wanted to compete, but the cylinders of his car "froze" in practice the day before. He worked all night on it, but—no go. He returned to Los Angeles to work on it some more, so as to be at Cotati May 7. The other drivers went there directly from Fresno's raisin festival.

No Nevada Road Race This Year.

It was announced there would be another great Nevada road race this year, but W. M. David, secretary Nevada Highway Association, Reno, says careful inquiry in several towns does not disclose interest enough to warrant it.

Nevadans need the money for more direct purposes. It is proposed to spend $1,500,000 on the Victory Highway route across the state.

In the whole vast state there are less than 100,000 residents. If the state had as many people as Duluth, Minn., its population would be about twice what it is. Per capita, its people bear a heavier burden as producers of things that make living for the whole country better, than do the people of any other state, in respect to being shackled by Federal holding of land, amounting to nine-tenths of the state's area. Fortunately, this is to be relieved in part by the new Federal road aid distribution formula.

Hearne Makes Theatrical Debut.

Eddie Hearne, "grandpa" among living American automobile racing men, may be prevented by a theatrical contract from competing on tracks for some time, lawyers say. On April 17 Hearne began competing with a motorcycle in a diminutive circular cage of slats, its sides perpendicular, in a Los Angeles vaudeville house. He used a "baby" car about one-fourth the size of his Duesenberg. The cage, a knock-down affair, was taken to the theater in a Reo speedwagon by the Reo Co., and Fred J. Wagner, famous starter, "gave 'em the flag." The cage bulged out so that one reviewer sat in the gallery. Hearne has done this stunt twice a day since.

Hearne began racing 15 years ago. He and Frank Croker, Spencer Wishart and David Bruce-Brown were known as "the millionaire kids," because of the reported wealth of their families. Hearne has raced more than 100,000 miles, at an average of nearly 80 miles per hour. He has won more than 400 events. He put the 250 mile world record at 108 miles per hour, on the Los Angeles track, November 24, 1921; but Jimmie Murphy, also in a Duesenberg, did 250 at 110.96 at San Carlos, December 11, 1921.

Pike's Peak Race, Labor Day.

The annual Pike's Peak hill climbing contest, from Colorado Springs to the peak's summit, 30 miles, will be held Labor Day, September 4, as for previous events.. F. C. Matthews is traffic manager in charge of the races, which will be under the auspices of Pike's Peak Auto Highway Co., Colorado Springs. This year there will again be three races—one for cars with piston displacement of 183 inches or under; one for 183 to 300 inchers; and a third for 300-inch and over. Prizes, as last year, will be $500 to each first place winner, and $200 for each second position.

San Diego Track Outlook.

San Diego hopes to have its projected speedway completed in time to have the opening race some day during Christmas week. It is intimated the site is adjacent to the Point Loma golf course on Dutch Flats, just north of the marine base. This is close to the city, and can be easily reached by street car and automobile.

It is understood that Prince Speedway Construction Co., Oakland, Calif., will build the plant, in which several San Diego capitalists are interested.

Must Show Gasoline Brand.

A new ordinance was passed to print by the city council of Oakland, Calif., April 16, requiring that all gasoline stations display discs showing their brand of gasoline, and forbidding filling tanks while motors are running. According to Commissioner Frank Colburn, who introduced the ordinance, it is aimed to protect the buying public. The ordinance is also approved by the fire chief as a safety measure.

GOOD ROADS WEEK HELD IN PHOENIX

State Highway Body and Two National Ones Gather—New Route to City of Mexico Is Urged Strongly.

Last week was Good Roads Week in Phoenix—six days of convention affairs, beginning Monday, April 24, and ending Saturday, April 29. Two national highway bodies convened—United States Good Roads Association and Bankhead National Highway Association. For the former it was its tenth annual gathering.

On the opening night these and Arizona State Good Roads Association held a joint meeting at the fair grounds, where, throughout the week, a good roads show was held. The exhibit of the Bureau of Public Roads covered almost 2000 square feet.

About 600 delegates registered the first day, including a party of 25 who went from San Diego by special train. Many motored to Phoenix, and the afternoon of opening day there was an automobile parade by the state body. Next day there was a trip over Salt River Valley's concrete roads, with lunch at a road camp near Chandler. Friday there was a Wild West show; and on Saturday a 110 mile jaunt through Tempe, Mesa and Superior to Miami, over the new link in the central automobile route, with a stop at noon to dedicate a manunment at the Pinal-Gila County line. At Miami there was a barbecue luncheon.

Texas-Mexico Highway Association had a strong delegation present to urge an 1800 mile branch of Bankhead Highway from Mt. Pleasant, Tex., to the border at Laredo, thence to Mexico City. Mexican government support is assured, it is said.

The speaking sessions ended Friday. A strong talk was that of Col. Ed. Fletcher of San Diego, which is 386 miles from Phoenix. San Diego County has bonded itself for a million and a half to build fine roads, including the one to Imperial County line. Through that county, nearly to Yuma, there is hard surfaced highway, and the remainder is to be finished in two years. Meantime the plank road between Holtville and Yuma is much used, and at Yuma the Colorado River is crossed by bridge, said to be a much better crossing than the ferries on the Parker or Blythe routes between Phoenix and California. The Yuma route now is made easily accessible from Phoenix by the 2000 foot apron across Gila River at Gillespie Dam.

Poor "arid" Arizona—the "treeless" state that happens to have a yellow pine forest said to be the largest in the world—has been a state only a few years. In size it is simply vast, yet many cities in other states contain more people than all of Arizona does. Its citizens are said to tax themselves more per capita than those of any other state, for good roads. The latest in that line involves an order to a Los Angeles company with plants in Victorville, Calif., and El Paso, for 400,000 barrels of cement, to be used in paving 163 miles of highway in Maricopa County, of which Phoenix is the hub. The cement order is claimed to be the largest single one ever awarded, excepting only Panama Canal deliveries.

"Crawl of the Only Road."

Having in mind Call of the Open Road Week, and the fact that there is only one highway southward on the Peninsula, San Francisco automobile men have applied to the out-of-town traffic problem the phrase, "Crawl of the Only Road." They want a second route badly, and soon. An additional solution, hoped for by them but apparently still opposed by Oakland, is a bridge over the lower end of the Bay.

THINKING TOTEM.

The great trouble with us is not that we have totems, for, indeed, they have their place and their use. The trouble is that we think totem.

Most people do not think at all until they find out what somebody else thinks. Far from esteeming it a weakness to have no opinion except that of the mob, we take great pride in our mob ideas. And we cast out as a leper anyone who dares to think for himself. The party calls him a renegade, the church calls him a heretic, and the nation calls him a traitor.

Indeed, most of our feelings that we call respect and reverence are nothing but the remnants of the old totem sentiment which our cave-dwelling ancestors experienced.—The Spectator, Hearst papers.

Arizona to Order 35,000 Tags.

Arizona is inviting bids on its 1923 motor vehicle license plates, to be ordered in June—about 35,000. They will be of sheet iron, as before, because the legislature failed to provide for having them made of Arizona sheet copper, which would cost $7000, or about 15 cents apiece, more. They will have white enameled surface and raised blue numbers and letters.

Watch him slowly wend his aimless way—straight across, diagonally or in semi-circles—the jaywalker.

City of Mexico's Show.

The Internationl Automobile Show in the beautiful National Theater in the City of Mexico was opened officially at 3 o'clock Sunday afternoon, April 16, with an address by Felix F. Palavicini, whose statement that "the automobile has defeated the railroad" was greeted with cheers. But the speaker warned his hearers that the victory of the automobile would be fruitless unless Mexico immediately set about improving her present roads and building new ones. The opening day crowd was a tremendous one.

The big National Theater was decorated beautifully, and the illumination was magnificent. A large military band furnished by the Government played a long program, followed by a public dance and inspection of the many exhibits. Practically all the better known makes of American cars were represented, including a liberal display of trucks and tractors, which were shown in the basement, the passenger car exhibits being confined to the upper floors.

The show was under the auspices of the American Chamber of Commerce, and from a business standpoint promises to have a far-reaching effect. Already the impetus has been felt in every branch of the automotive industry in Mexico.

There was a spirited contest immediately after the opening for the honor of selling the first car. The prize was landed by the Buick representatives, M. S. Leishman & Co. Second and third sales were recorded by B. Estades & Co., who handle the Packard.

There were many representatives of American cars present during the week, while the representation of automobile men from the larger Mexican cities seemed to bear out the prediction that the present show will be followed by a marked increase in sales throughout the republic.

Sacramento for Park-to-Park Body.

Tentatively, Sacramento has been selected for the next convention, in June, of the National Park to Park Highway Association. Not much is heard of the association, but its work is being carried on by Gus Holm's, of Wyoming, who is credited with having originated the idea and who now is secretary-manager, with headquarters in Denver. Financial stamina, which formerly came from regional donations which were uncertain, now is maintained by individual memberships. Mr. Holm's has four representatives in different parts of the Far West, working for the idea for which the association stands—a practicable highway circuit of the national parks for tourists.

SPOKANE FIGURES ARE ENCOURAGING

Dealers' Reports on March Show Sales of New Cars Good, and Situation as to Used Cars is Pleasing.

There was great improvement in the automobile business of Spokane during March, judging by reports by dealer members of the Spokane Automobile Chamber of Commerce. In spite of unfavorable weather, sales of new cars were quite encouraging. Retail business as reported by dealers was as follows: Eight, good; nine, fair; three, poor; one, bad first half of month, fair in second half. The wholesale business was reported by some dealers as follows: Five, good; five, fair; five poor.

The business of some dealers is confined to retail only. In comparison with March, 1921, dealers reported as follows: Nine, some increase; three, little change; two, 100 per cent increase; one, 160 per cent increase; one, 300 per cent increase; three, decrease.

Stocks of used cars reported April 1, 1922, as compared with January 1, 1922, were as follows: Three, entire stocks sold out; four, slight reduction; two, stocks practically same; two, stocks reduced two-thirds; one, stock reduced 25 per cent; one, stocks reduced 33⅓ per cent; one, stocks reduced 40 per cent; six, stocks reduced 50 per cent; one, stocks reduced 80 per cent. There was decided improvement in the used car situation in February, and the outlook for non-loss disposition is good.

Due to the backward season and incidental slowing up of buying, all dealers, without exception, were inclined to predict unusually good business for April.

The latest arrival in Spokane motordom is the Wills Sainte Claire car, manufactured by C. H. Wills & Company of Marysville, Mich. Three models have reached Blackwell Motor Co. and these three are said to be the only cars of this make in the state.

Hodgkins Motor Co., Haynes distributor, has removed from Havermale Island to W807 Sprague Ave. L. W. Hodgkins is a veteran dealer. The new headquarters, with floor area of 50x150 feet on each of two floors, are being overhauled. A stock room is being added. The company booked orders for 10 cars in the first half of April.

Ford Prices Lower on Coast.

Prices of Ford cars and trucks, shipped knock-down from Detroit to Pacific Coast points, were reduced $20 recently, following the inauguration of lower railroad freight rates. The Coast is the only territory so benefited. Ford plants west of the Rockies are now assembling sufficient knocked-down cars to fill the demand on the Coast, and it is estimated that the $20 reduction means a saving of $400,000 to Ford buyers in this region during the remainder of 1922.

Tillotson to Coast for Appleton.

On April 1 R. P. Tillotson took charge of the California territory of Appleton Electric Co., 1701-13 Wellington Ave., Chicago, manufacturer of Auto Reelite and other accessories, in addition to conduit fittings, lighting and other electrical specialties. Mr. Tillotson for 13 years was Western sales manager and director. The former Coast representative was Keeler, White & Co., San Francisco. Branch office and warehouse will be maintained in Los Angeles. Arthur S. Merrill has been made general sales manager, in Chicago. He was sales manager of Chicago Fuse Mfg. Co.

TOM H. WILKINSON.
There's a little story in this issue about Mr. Wilkinson, who has been appointed Pacific Coast representative of Lee Tire & Rubber Co., New York. He is not a stranger to the Coast, by any means.

The Appleton Co. has a branch office and warehouse in New York and resident representatives in Boston, Philadelphia, Atlanta, Pittsburgh, Cleveland, Detroit, St. Louis, Oklahoma City and Portland, Ore.

Standard Oil Net Profit.

Net profit of Standard Oil Co. (California) for 1921 was 14.25 per cent and totaled $33,588,230. Surplus on December 31, 1921, was $235,650,645.

About Tom H. Wilkinson.

A recent acquisition to the executive force of the Lee Tire and Rubber Co., of New York, is Tom H. Wilkinson, as Pacific Coast representative. Mr. Wilkinson's resignation as manager of the San Francisco branch of United States Rubber Co. a few weeks ago came as a surprise, after seventeen years of service with it. There was considerable conjecture as to his plans when he left for the East.

Many years ago Mr. Wilkinson was an associate of Harry E. Field, now general sales manager of Lee Tire and Rubber Co., in the old Hartford Rubber Works Co., in fact, he came to San Francisco originally as representative of that company. When the Hartford Co. was absorbed by the United States Rubber Co., Mr. Wilkinson joined the new organization and has held important executive positions in it. During a recent visit to the Pacific Coast, in the interests of the Lee Co., Mr. Field called on his old associate, to find that he had just handed in his resignation to Colonel Brady of the United States Co. Mr. Wilkinson's appointment with the Lee Co. was the result.

Waddell Re-Joins Durant.

Capt. Al. G. Waddell, one of the best known automobile advertising men on the Coast, has returned to the post of director of advertising for Durant Motor Co. of California, with headquarters in Oakland, a position he held for several years, but which he left to direct advertising for Ruckstell Sales & Mfg. Co., Berkeley, manufacturing a 4 speed axle for Ford cars. Captain Waddell has been closely associated with R. C. Durant for the past 7 years, directing advertising first for Chevrolet, later for Durant Motors on the Coast. In the late war he rose from private to captain of artillery and spent 6 months in France.

Efficiency as an artilleryman won Waddell a captaincy in the war, but he's no military martinet. His speedway copy and his grin gladdened many a gray day in Los Angeles the past few months.

Hamlin Challenges Garbutt.

Ralph Hamlin and Frank A. Garbutt, Los Angeles trade veterans, may have a motorboat race. Hamlin owns Joker and Garbutt owns Mystery IV, said to be the most wonderful boat of her class in the world. Hamlin challenges for a 10 to 15 mile race in the outer harbor or off Terminal Island, for a side bet of one new A-7-A Hall-Scott aviation engine—to use, perhaps, in the tiny hydroplane he is building. He has one in his boat.

IMPORTANT MOVES MADE IN SEATTLE

Three Large Distributing Concerns in Puget Sound Metropolis Change Their Locations—Business Good.

Three large distributing concerns in Seattle have changed their locations in a sort of triangular moving arrangement. Mack International Motor Truck Co., factory branch for distribution of Mack trucks, headed by C. C. Eichelberger, has moved to a new building erected for its own special needs at Ninth and Roy Sts. Within a 5-mile radius 120 owners of 200 Mack trucks have their places of business.

Shields-Livengood Motor Co., Lexington car distributor, takes over the Gandolfo Building, formerly tenanted by the Mack truck branch, at Pike and Terry Sts., where it has much more floor space to handle a strong volume of spring sales.

Mitchell, Lewis & Staver, handling Jordan, Mitchell and Gardner cars and Jumbo trucks, have moved to the former location of Shields-Livengood, a 4 story building at East Pike and Eleventh Sts.

Another prominent transaction is the purchase of Grand Central Garage, Fourth and Columbia Sts., and of Pioneer Auto Co., at the same location, Case car agency, by O. M. Berthold from C. A. Kolstad. Mr. Berthold was an executive in Pierce-Arrow sales in Seattle many years.

Formation of Washington Auto Body & Wheel Mfg. Co. is an important event in the history of Seattle's automobile top, body and wheel making industries. The new concern takes over Hoyt & Eicks, one of the largest and oldest establishments of the kind in the Pacific Northwest. Gus A. Eicks, an officer in Hoyt & Eicks, remains as manager of the new company, which is controlled by Louis Williams, a local business man, and which remains at 911-15 Eleventh Ave.

Fifteen carloads of Haynes cars have been asked for the Pacific Northwest territory by A. C. Stevens, distributor, with headquarters in Seattle, and Hodgins Motor Co., Spokane.

William L. Hughson Co.'s Seattle branch sold 262 new and used Ford cars and trucks during March, according to W. O. McKay, branch manager.

Caravan of 400 Cars, Maybe.

Short item, but what it's about may be very long. May 31 to June 3, inclusive, the National Association of Real Estate Boards convenes in San Francisco. Hundreds of delegates will stop in Los Angeles on their way. The 700 members of the Los Angeles realtors' body have been asked to loan their motor cars to carry the visitors, single, wedded or of full-family dimensions, upstate to the Bay City. It is estimated 400 cars will be needed. The tour days are to be May 29 and 30.

Wears a $105,000,000 Smile.

Frank Reese, called a "paving trust lobbyist," who holds forth in Los Angeles' city hall, is said to be wearing a smile consonant with the city engineer's suggestion that 2100 miles of streets now topped with heavy asphaltic oil, be paved, at say $50,000 a mile, totaling $105,000,000. The engineer intimates that, if this be too much, at least 160 miles of oiled streets be paved, at a cost of only $8,000,000. Los Angeles spends $100,000 a year on oiled streets.

TRY TEAM WORK.

For unemployment, for hard times, man alone is to blame; man's inhumanity to man. The crops grow just the same, the rains fall, the needed snows come, the mines give up their ore, and the cattle dot our hills—just as of old. Never has God or nature ceased to bestow the blessings that come from the earth. But in the sight of all these blessings men have elected to differ unreasonably. An angry debate starts, and soon the world is in a foment. Trade halts, production stops. Entire nations go into a deadlock on the trade basis. Manufacturer, merchant and the public view each other with suspicion and the evil circle is complete. Millions become idle, many grow hungry—the whole world suffers.. Analyze honesty and you can reach only one conclusion — negative mental processes, purely man-made antagonisms, lie at the root of the evil.—Evangeline Booth.

Los Angeles' downtown streets, though finely paved, are developing clusters of chuckholes. The traffic is tremendous and the English idea, of chucking a patch into a chuckhole while it is small, is not the vogue.

Chucking Rocks at Chico.

It is fortunate for the people of Chico, Calif., that they do not live in glass houses. For several weeks rocks and stones fell down within the city limits, apparently from the sky. The other day an automobilist standing by his car at the curb narrowly escaped being hit by an 8-ounce rock. The bombardment was first noticed on March 9, and city officials are investigating reports that a catapult is being used. All the embryo Sherlock Holmeses in Northern California are trying to solve the mystery.

On the Way to Normalcy.

Official figures from California's motor vehicle department indicate the automotive industry on the Pacific Coast is far on the road to normalcy. Registrations of new cars for the first quarter of the present year show a gain of 9188 over those for the corresponding quarter of 1921, the actual figures being 29,566 and 20,368, respectively. This is an increase of over 45 per cent for the period mentioned, and is the best possible indication of the healthy condition of the automotive business. Indeed, the figures for the first quarter of the present year exceed even those for the first quarter of the banner year, 1920, when 26,612 new cars were registered in the State.

The appended table indicates also that sales of motor trucks are increasing to a marked degree. There were 2910 registrations of new motor trucks for the quarter, as against 2305 for the corresponding period of 1921—a gain of 605, or 26 per cent plus. The figures follow:

	Nor. Cal.			Sou. Cal.		
	Cars	Trucks		Cars	Trucks	
1921						
Jan.	1,593	199		2,003	213	
Feb.	1,310	183		1,903	243	
Mar.	5,525	720		5,729	747	
	8,428	1,102	9,530	9,635	1,203	10,838
Total for first quarter of 1921, 20,368.						
1922						
Jan.	1,972	185		4,049	369	
Feb.	3,719	481		4,895	604	
Mar.	5,862	624		6,159	647	
	11,553	1,290	12,843	15,103	1,620	16,723
Total for first quarter of 1922, 29,566.						

Mulch Joins Star Motor.

The name of R. H. Mulch has been added to the list of prominent automotive names included in the Coast division of Durant activities built up within the past year. Mr. Mulch has severed his connection with General Motors and Chevrolet Motor Co. of California, for which he was sales manager, to become associated again as sales head with his old chiefs, R. C. Durant and Norman De Vaux, in the newly organized Star Motor Co. of California. When leaving General Motors he was in charge of the great Chevrolet plant at Fort Worth, Tex., and his acceptance of the sales managership of Star Motor Co. of California was wired to the Coast.

Hundreds of applications have been received at Oakland headquarters for agencies on the new Star car, it is announced. According to President De Vaux, there are no shares of the company for sale, it being a tightly closed corporation, with all stock held by De Vaux and R. C. Durant, except a few distributed among old employes.

PORTLAND TRADE OPENING UP WELL

Most Established Lines Doing Better Than in Same Month Last Year and Early Part of this One.

Spring business in the Portland territory has opened very well for practically all established lines. For most of them, March was considerably ahead of January and February, and well ahead of March, 1921. Some dealers fear a shortage of cars soon and have sent rush orders to the factories for additional deliveries.

Demand for the cheaper cars and particularly for used cars, has improved materially and the result is quickened business all along the line. More expensive lines have benefited in about the same proportion as the medium and low priced ones.

Among new model cars arrived in Portland recently were the new Chandler, received by Twin States Motor Car Co.; new Packard Single Six, received by Portland Motor Car Co.; 1922 Marmons, by H & E Auto Co.: and the new Jewett, by Cook & Gill Co., Paige distributor.

Organization of a new firm to be known as Pacific Motor Co., to handle Durant cars in the Portland territory, is announced by C. M. Steves, sales head of Durant Motor Car Co. of California. The new company is composed of B. J. Ghent, former Eastern Oregon business man; C. F. Palm of San Francisco, banker and lumberman, and S. C. Cook, California automobile man. Mr. Ghent and Mr. Cook will be in active charge. Temporary quarters are on lower Broadway, but there will be a more central location as soon as the quarters can be obtained, or a building may be erected. A complete line of 4 cylinder Durants is expected to arrive in Portland quickly, and some of the 6 cylinder cars also are expected. The company is expected to be the first to handle the new Star car when it is ready for distribution in the Pacific Northwest about next fall, although it has been announced that exclusive retail sales rights for that car will not be given.

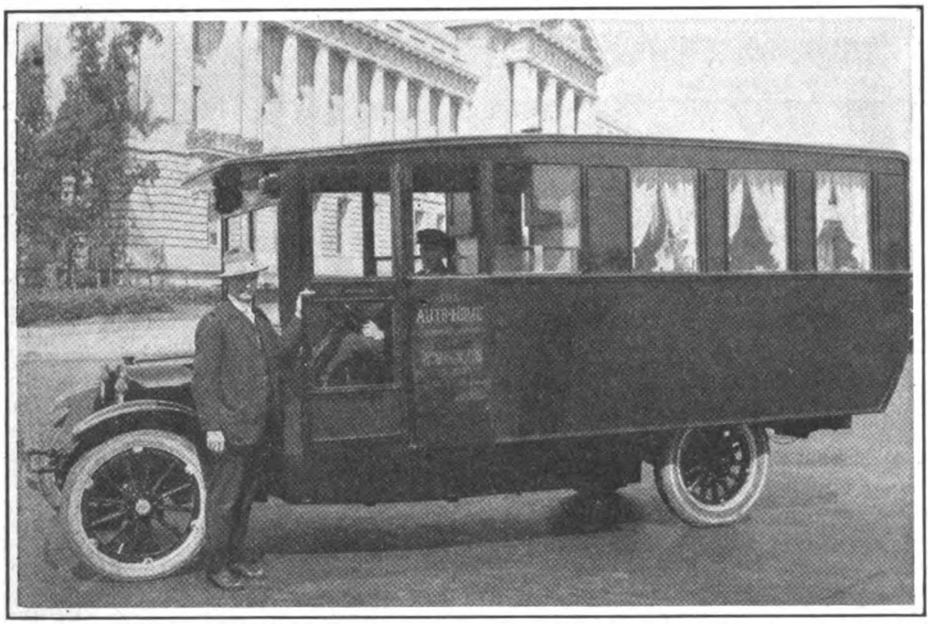
C. B. Lynn, assistant manager of the Portland branch of White Co. for the past 2 years, has been made manager following the transfer of Manager Cornell to Seattle.

The Lee line of trailers, dump bodies and loading equipment for motor trucks will be handled for the Pacific Northwest by F. V. Parsons and I. N. Gordan, forming Parsons-Gordan Co., Inc., Everett and Sixth Sts., Portland. Mr. Parsons formerly was Lee trailer sales manager for William L. Hughson Co.'s Portland branch.

Lawson Auto Co., Columbia car distributor, is in larger quarters at 60 North Broadway, where it will concentrate most of its activities, retaining its former East Side headquarters, Broadway and East Third, as a branch.

Distribution of Marmon and Stephens cars in Oregon has been taken by a new concern, H. & E. Auto Co., Washington and 19th Sts., Portland. A. M. Colville, former Marmon representative in the West, is general manager, and W. S. Ulrey, former Pacific Coast representative for the same company, is service manager.

Portland continued to be a mecca for leading factory men during the past couple of weeks—among them President H. H. Bassett and General Sales Manager E. T. Strong, of Buick Motor Co.; President George H. Hannum and General Manager C. J. Nephler of Oakland Motor Car Co.; W. J. Velie, Jr., secretary of Velie Motors Corp.; and H. A. Biggs, vice president of the Studebaker Corp. The visits in each case were taken advantage of for holding sales conferences, in which dealers and representatives from all over Oregon participated.



DOOR GLASS IDEA TO AVERT DANGER IN TRAVELING ON MOUNTAIN ROADS.

The picture shows how glass has been installed in the lower part of the doors on either side of a specially designed Northern California motor stage, to give the driver a clear view of the road at all times. This means much on dangerous mountain routes. On one side the nearness of the edge of a precipice can be watched. On the other side, rocks may have fallen or may extend from the side of a mountain and, if not seen, may muss up the vehicle.

Leach-Biltwell to Invade East.

Leach-Biltwell Motor Car Co., Los Angeles, now has California very well covered, through Golden State Motors Corp., and Ulrey Noteman Motor Co., Oakland, the latter having several counties. Now the factory heads are preparing for a big sales invasion of the East with the Leach 999. The many inquiries received, and the favorable comment at the national shows, convinces them the time is ripe to establish distributors in the leading Eastern cities. With several Leach motors as factors in the Indianapolis 500 mile race the Eastern outlook will have additional interest.

It is expected the factory will be producing five completed cars and motors per day by June 1.

Heads Coast Branch of Peerless.

R. H. Collins, president and general manager of Peerless Motor Car Co., Cleveland, announces appointment of A. K. McLuny as manager of Pioneer Motor Co., San Francisco, direct factory branch, with a sub-branch in Oakland.

For many years Mr. McLuny was closely associated with Mr. Collins in manufacturing and sales, after which he embarked in the automobile business on his own resources, and he has an unusually wide acquaintance in the automobile field.

Stiff Arizona Tax Plan Lost.

A proposal to tax stage and truck lines on Arizona state highways as much as 20 per cent of earnings seems to have been pushed hard, though preposterous. The state senate finally defeated it, April 12.

Denver's mountain parks system of 5000 acres, located 12 miles from the city's boundaries, had 800,000 visitors last year.

OPEN ROAD WEEK IDEA DONE BROWN

San Francisco's Six-Day Celebration Handled With Characteristic Vigor and Gratifying Results.

The automobile distributing and eccessory trade in San Francisco closed its six-day celebration of Call of the Open Road Week April 29, with most gratifying success and evidence on every hand that the week is firmly established as a permanent feature on the automobile man's calendar in the Bay City.

This celebration, the second one to receive unanimous attention from the automobile trade, found sales rooms and display windows decidedly surpassing the 1921 efforts for elaborateness and artistic effect. As preparations progressed many distributors became friendly rivals and did not scan costs too closely. They went in more than ever for camping and touring scenes, exhibits of camping equipment, and presentation of the newest and best their factories could offer, but several installed motion picture entertainments, and three prominent distributors erected aerials on their roofs and attracted and held day and evening visitors by radio concerts from large and expensive wireless sets. Greer-Robbins Co., Earle C. Anthony, Inc., and Chandler-Cleveland Co. furnished radiophone entertainment.

Willys-Overland Pacific Co. installed a miniature golf course as part of the exhibit in its large sales room. In the very elaborate camping scene presented by Chester N. Weaver Co. a famous quintette sang camping songs every day and night. H. O. Harrison Co. had the co-operation of the Forest Service and showed a miniature national forest as the background of its camping scene, with the idea of doing its share toward making the public realize the unsurpassed vacation-time possibilities to be found in the 18,000,000 acres of Government-owned mountain land in California.

Brilliant lighting in sales rooms, and weird, attention-compelling "red fire" effects, appeared every night along Van Ness Ave., while a brightly illuminated airplane circled the skies nightly over the automobile sales and business district.

The combined automobile accessory show and camping and touring equipment exhibition installed by Don Lee, in his large building on Van Ness Ave., taking up the rear half of the first floor, and the entire second floor, drew throngs of visitors. It included several camping scenes, and the products of nearly 25 San Francisco automotive and sporting goods concerns. In addition to the out-of-door atmosphere it showed the astonishing degree to which refinement of automobile touring equipment has progressed, and how Coast manufacturers are working to satisfy the demand.

On Wednesday during the week a unique luncheon was held in the Lee sales room, where tables were set for 500 men—members of the Motor Car Dealers' Association of San Francisco, the Downtown Association, and San Francisco Advertising Club. Peter Clark MacFarlane, author of renown, and John L. McNab, talked interestingly on the lure of the out-of-doors.

Accompanying preparations for the opening of the touring season, the past two weeks have been replete with distributing agency changes, concerning some five well known passenger car lines.

EMPLOYMENT.

Employment figures are very encouraging. In one month the International Harvester Co. took on 1500 additional men; some of the larger automobile companies have increased their forces still more; rubber companies have taken on considerable numbers of workers; copper properties have been re-engaging working forces to get operations under way; steel plants are working on a broader scale; equipment companies have very largely enlarged their operations; the veritable boom in building is creating a keen demand for skilled tradesmen; some of the railroads have started improvement plans involving the employment of additional workers; the oil industry is busier; the lumber trade is on the upgrade. In short, in hardly a single industry are forces being reduced, whereas in many, many directions very considerable additions are being made. —B. C. Forbes, in Hearst papers.

Gilbert Woodill, who for the past year has acted as Pacific Coast representative of Kissel Motor Car Co., Hartford, Wis., will handle Coast distribution of Kissel cars, with quarters at 1803 Van Ness Ave.

Mitchell Motors Co. of California, Inc., has been formed in San Francisco with $25,000 capital stock by J. H. Morris, M. R. Schaw, and Lisle T. Jacks, to distribute Mitchell cars in the state.

Bert Latham, head of Bert Latham, Inc., 1836 Washington St., has renewed his eight years' connection with Stutz car sales by becoming retail dealer for this car in San Francisco and San Mateo Counties. Stutz Motor Car Co. of America, Indianapolis, is introducing a new service arrangement in the Northern California territory, according to Bruce Daniels, factory representative, with headquarters in the Monadnock Building, San Francisco. Under his supervision two official service stations will be conducted in San Francisco, and one each in Oakland, Sacramento, Stockton, and San Jose, witn others to be appointed.

J. W. Leavitt & Co., with branches in San Francisco, Los Angeles, and four smaller California cities, have added the Columbia car agency for California to their earlier line, the Oldsmobile.

California-Stearns Co., Los Angeles, headed by P. M. Reidy, has had Northern California included in its sales territory on the Stearns-Knight. A branch is being opened in San Francisco in charge of Jack Maddux.

Earle C. Anthony, Inc., recently received its first quantity shipment of the new 6 cylinder Durant, and has opened an additional exclusive Durant sales room on Van Ness Ave., diagonally opposite its headquarters, in charge of J. A. Jones.

H. O. Harrison Co. had received 522 Hudson and Essex cars at a recent date since March 1, and reports that a real shortage of many types of both lines is likely unless factory shipments

There continues to be a profuseness of new models appearing in distributors' sales rooms, and an active demand is taking them almost as rapidly as they arrive. Among them are noted the Stutz open models; Kissel sport model; Durant 6 cylinder open models; Columbia models, the complete line; Oldsmobile 4 cylinder sport model; Rickenbacker coupe; Nash 4 cylinder coach; and Packard Single Six models of both 126 and 136 inch wheelbase.

In the way of personnel appointments an important one is that of S. A. K. MacLuny as manager of Pioneer Motor Co., direct factory branch of Peerless Motor Car Co., Cleveland. Ray Wise has been made sales manager of L. H. Rose Co., Chalmers and Maxwell distributor, succeeding J. L. Brambila, resigned. Paige Co. of Northern California, headed by Owen McCusker, has made D. N. Larson wholesale manager, and E. C. West service superintendent.

The Motor Car Dealers' Association has agreed upon a strict observance of the Sunday closing rules, both as to sales rooms and service departments. The idea was approved strongly several years ago, but not unanimously adopted by member distributors. According to W. F. Culberson, association president, it is believed that Sunday closing does not inconvenience the public, while it does benefit the distributors' employes.

OUTDOOR LURE IS GIVEN FULL SWING

Los Angeles Trade Prepares Heartily for Open Road Week—Sales Show a Pleasingly Lively Increase.

Drawing deeply upon both their treasuries and their appreciation of the artistic, automobile distributors in Los Angeles are placing upon their businesslike surroundings a colorful and festive tinge, in preparation for Call of the Open Road Week, to be observed May 1-6.

The best decorative talent in the city is being utilized for the adornment of sales rooms and display windows. The utilitarian angle of the automotive industry, so strongly stressed today, will be softened by a universal appeal to the public's realization of the part the motor vehicle plays in satisfying the urge of the out-of-doors on the Pacific Coast. Camping scenes, with displays of camping paraphernalia, will be the chief feature, it appears, but in addition several dealers have seized upon the latest attraction, the radio set, and will provide daily and nightly concerts in their sales rooms. Transportation exhibits and moving pictures also will be shown.

In their efforts members of the Motor Car Dealers' Association have the co-operation of automobile accessory dealers and stores, large business houses in other lines, and department stores. The newspapers are printing a wealth of sporting, camping, touring and general "where to go" information and advice. Beach and mountain resorts in Southern California will be in full swing of opening up for visitors by the end of the first week of May.

Judges have been chosen in the ladies' driving contest to be held in Exposition Park, May 4-5. They are Capt. Cleveland Heath, of the city traffic squad; George W. Stephenson, A. A. A. representative; A. M. Young, manager of the Los Angeles speedway; and Mrs. Roland Crocker. Owen R. Bird is clerk in charge. Only members of the Motor Car Dealers' Association are eligible to make entries, and only one entry for each car represented. There will be two classes, and three silver cup prizes for each class.

Observance of the week is expected to stimulate late spring sales. Meanwhile, practically every distributor is handling his share of the general business revival in passenger car sales. Packard sales in March, for example, exceeded by 210 per cent those of March, 1921. Don Lee's Cadillac sales in the first two weeks of April were about 100 per cent larger than in the same two weeks last year.

Walter M. Murphy Motors Co. reports that it is oversold on several models of the Lincoln car line, and Mr. Murphy is now at Detroit, seeking an increased allotment.

Paul G. Hoffman, Inc., sold 75 new Studebaker cars in the first week of April, 13 more the following Monday, 20 on Tuesday, and every indication was given of surpassing the March high mark.

J. V. Baldwin Motor Co., a Chevrolet dealer in Los Angeles, has been awarded first honors for January and February sales among all the Chevrolet agents in Zone Six, which includes California, Oregon, Washington and Arizona.

The increase of sales in the commercial field is shown by the report of White Auto Co. According to O. R. Fuller, president, his company sold 142 White trucks in 77 working days, handling a business valued at $568,000.

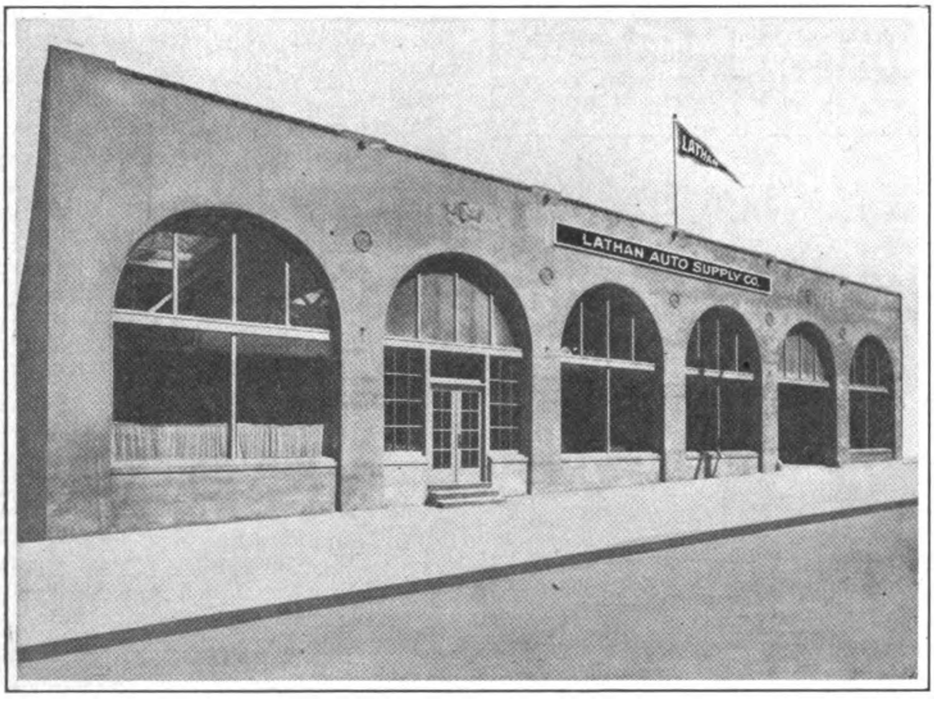
California-Stearns Co., handling the Stearns-Knight in Southern California, has had Northern California and Arizona added, it is announced by P. M. Reidy, president. A branch has been opened in San Francisco. A. P. Hayt has been made Los Angeles manager.

An addition to the flourishing list of Chevrolet retail dealers in Los Angeles is Brown & Cook, 1825 East First St., who will specialize on the Boyle Heights section. A similar distributing arrangement is followed in sales of Durant cars, and Shafer-Harrigan-Cleveland, Inc., Duesenberg distributor, has added a retail Durant agency at 2900 South Figueroa St.

John J. Troy, president of Troy Motor Sales Co., Nash and La Fayette car distributor, announces that Robert S. Breyer has purchased an interest in the company and will act as vice president and general manager. Mr. Breyer is well known on the Coast from seven years' association with Don Lee, with whom he rose to be sales manager, and more recently as general manager of Western Motors Co., Wills Sainte Claire agency. George H. Kiley, former Goodyear branch sales manager in New York, has been made sales manager of the Troy Co.

Roy G. Stuart, identified with Chevrolet, later with Durant, on the Coast since 1915, has been appointed Durant sales manager of Earle C. Anthony.

The list of new models recently arriving in Los Angeles includes the Studebaker Special Six California touring sedan; the complete Durant 6 cylinder line; the Hudson 5 passenger enclosed coach; Nash 4 cylinder coach; Packard Single Six, 126 and 136 inch wheelbase; and the new Jewett line. The first showing of the earliest Jewett types to reach the Coast attracted nearly 2000 visitors on a recent Sunday to the sales room of Paige Motor Co. of Southern California.



THE NEW HOME OF LATHAN AUTO SUPPLY CO. AT 1454 PINE ST., SAN FRANCISCO.

Lathan Auto Supply Co. now occupies a new building at 1454 Pine St., San Francisco, which fits its special needs and gives it 14,000 square feet of floor space, which its growing business necessitated. More than a third of the space will be used in manufacturing the Critz lubricating system. The company also is Coast distributor for Zenith carburetors, and handles Steel Wing shock absorbers.

Denver's Tourist Crop Pays.

In seven years the sales to tourists in Denver have brought August, once the poorest in the business man's calendar, next to December, the heaviest in point of sales.

SAN DIEGO FEELS THE BETTER TIMES

Trade Notes About City That Is the Country's Uttermost Southwestern Turnstile of Commerce.

San Diego's automobile business is looking up, in conformity with all other parts of the Pacific Coast, and as becomes the uttermost, southwestern gateway in and out of the United States. Through San Diego, as a seaport, a vast volume of foreign commerce must flow in the not far distant future. Particularly as civilization progresses on the west coast of Mexico, and farther south, San Diego, as a port and as a manufacturing and distributing point, will be a tremendous factor with respect to that region and to its own logical hinterland, Imperial Valley and much of Arizona—even much of the western tail of Texas and of New Mexico. San Diego's automotive merchants will share in all this.

A recent notable event in San Diego was a farewell dinner by members of its dealers' body, honoring Byron F. Naylor, whose retirement to his Loma Portal ranch has been noted in Motor West. He was Buick agent 18 years and drove the first gasoline car over the high hills to Imperial Valley, in 1900. It was a one-lung Cadillac.

New officers elected on the "young-blood" ticket at the semi-annual election meeting of the San Diego dealers' body are: President, Louis C. Maire, Oldsmobile distributor; vice president, Eugene Martin, Franklin and Reo dealer; secretary, J. H. Smith, of the Oakland agency; treasurer, W. B. Conniry, veteran Hupmobiler.

The Ruckstell 4 speed axle for Fords is now being sold at the B. W. Sinclair Ford agency.. H. W. Klippin, factory representative, is in San Diego to launch the sales and service organization. He reports that the axle has been adopted as equipment by the Ford Motor Co.

S. E. Bedford, factory representative for the Earl car in Southern California, has driven from San Diego to El Centro and return with a stock model Earl, sealed in high gear, according to Frank Bawden, San Diego branch manager. Mr. Bawden announces his withdrawal from local motordom as a result of the sale of the branch by H. J. Wurzburger Co. to outside interests that, however, expect to continue to handle the Earl.

J. Stanley La Sha, San Diego distributor for the Willard battery, is taking advantage of the radiophone fad sweeping the nation. He is installing a complete set, with magnovox attachments for use. National baseball scores, operas, speeches, concerts and general news of the day will accompany the pleasing melody of tinkling cash from increased Willard sales, according to La Sha's expectations.

To Close Final Desert Gap.

Contract for the last gap of the San Bernardino-Imperial Valley lateral, bridging the desert portion between Banning and the edge of the irrigated section near Westmoreland, in the valley, namely 12½ miles from Banning to Whitewater, has been awarded by California Highway Commission to an El Paso concern on a basis of reinforced concrete to cost $177,880. This sum plus state-furnished material, makes a total cost for the section of $274,584. Fifteen bids were received on specifications calling for prices on both asphaltic concrete 5 inches thick and 16 feet wide, and reinforced 5 inches thick, 16 feet wide and a 7 inch edge. The lowest bid for asphaltic concrete was $274,243.

TEN SUCCESS RULES.

1. **Select your own business.**
2. **Let your pledged word be sacred.**
3. **Whatever you do, do with all your might.**
4. **Never indulge in intoxicating drinks.**
5. **Let hope predominate, but be not too visionary.**
6. **Do not scatter your powers.**
7. **Engage proper employes.**
8. **Advertise your business.**
9. **Avoid extravagance.**
10. **Do not depend upon others.**

—Now.

Quick Insurance Payment.

The recent explosion at a Downey, Calif., service station, in which eight men were killed, has attracted considerable attention in the automobile world. Several interesting features have been brought to light in connection with the disaster which should provide serious thought for everyone in the business. Among other points to note is that one of the victims, Walter L. Pulley, carried a $20,000 life insurance policy through the Merchants Insurance Exchange Agency, of Los Angeles. Mr. Pulley died at 2 a. m. on April 27 and at 4 p. m. of the same day—only 14 hours later—the insurance company's check for $20,000 was handed to his widow.

This instance illustrates the value of the extra protection without any additional cost, as provided by the Merchants Insurance Exchange.

Every day is a better day, now.

Coast Banking Situation Good.

Report of Twelfth Federal Reserve District, released April 28, covering practically the whole Pacific region, makes the fact very clear that bad times are over, by percentage comparisons in various lines. Improved conditions are reflected by the fact that borrowings by city and country member banks combined, from the Federal Reserve Bank, decreased 19.7 per cent between March 8 and April 12.

Significant San Francisco news is that, after a long period of decreasing bank clearings, there now is steady increase. This is assurance that conditions in a very large area, affecting those clearings, have changed favorably.

A bank researcher of Los Angeles, on a survey of San Joaquin Valley, finds agricultural opinion is the year will be "the most prosperous in a decade."

Los Angeles' bank clearings have been climbing by jumps, a long time.

Prosperity Evidence.

Improvement and optimism all over California were evidenced by the March report of the district director of the U. S. Department of Labor's employment division, just out.

In the Pacific Northwest there is similar evidence. The lumber industry is a good index. Washington and Oregon mills are operating at less than 6 per cent under normal production. Some cannot meet the demand. Department stores show more activity than for several years. Furs from Siberia are selling well, with prices strong. In jewelry, "necessities" still have the call.

Not a Bit Nutty, This.

Edward G. Lowry, in a copyrighted financial and industrial article in the Public Ledger, Philadelphia, early in April, said: "It is only necessary to report at this juncture that California is as sound as a nut, economically, financially and industrially; that because of her favored condition she has not had to endure the pinch that the rest of the country has felt, and that she is, as ever, confident, lively, aggressive and unafraid."

Moreland Truck Show.

Moreland Motor Truck Co.'s Los Angeles branch held a show of its 1922 line, including two new models, all last week, from 8 a. m. to 9 p. m. Special-interest construction details were featured.

Winter lay so long in the lap of spring this year that it caused people to make remarks.—Bill Nye.

Motor West
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Established 1907

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MAY 1, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

Motor Vehicle Tax Ideas—and Facts

MOTOR vehicle license taxes generally are on a horsepower basis. In California a weight fee is added for solid tired vehicles. More logical than the former, and more accurate than the latter, would be a combination based on ton miles traveled, and on road shock tests.

This is not a prophecy that the ton mile idea will be adopted. Depending on the more or less honest faces of speedometers would make it succeed approximately, but assuredly some dials somehow would be made to register less than now.

As to road shock tests, the U. S. Bureau of Public Roads finds that unsprung weight, that is, weight below the springs, is an important factor; how important, compared with whether tires are solid or pneumatic, is not stated if it has been learned. It is known, however, that any gross weight, supported by springs, causes less impact than less weight not so supported.

The basis of ton miles and road shock would be in accord with the present idea of putting higher taxes on those who use the highways most, and would enable it to be done more definitely. If the present horsepower tax idea be taken literally, it is ridiculous. Small, busy vehicles damage roads much more, collectively and, often, individually, than do the fewer large ones, which have more horsepower but are used less.

Fortunately, what happens to be a joke on some users of large motors works a very practical benefit to the public. The small cars, that hit the highways constantly and hurt them most, also make roads pay high dividends. It is the large majority of small, busy cars that increase average prosperity or, as some pessimists would say, decrease average misery.

Some day, no doubt, what proportion of gross weight should be permitted to be unsprung without extra taxation will be known, and the knowledge applied in conjunction with that as to how much weight should be permitted per inch width of solid and pneumatic tires. When that knowledge is used in taxing, as a penalty for abusing highways, and no tax whatever is levied for useful use of the roads, then we will more nearly be in our right minds than we are today. The present huge total tax levied on motor vehicles will be shifted to the shoulders of us all, as the general public—and quite fittingly, quite desirably. Our gain, by increasing the productve power of motor vehicles, will far overbalance the cost, which will be a splendid investment. In one Pacific Coast state motor vehicles represent only 2 per cent of the state's total property valuation, yet bear 20 per cent of the total taxes. This is handicapping productivity.

Some day, when we wake up, we will recognize the principle, and apply it as far as practicable, that only those of us who do not work should be taxed in such a way as to be handicapped. That idea will facilitate the functioning of SERVICE, personified in those who do work. Also, it will help shift from the workers the maintenance of the relatively very few who are born or become incompetent.

The way we tax ourselves now is as foolish as running with weights tied to our legs.

Automotive Taxes Should Go to Roads

THE point is made in connection with the soldier's bonus that the motor vehicle is paying a huge share of the highway construction and maintenance burden in this country. The point is of such importance that it will bear repeating as a means of emphasizing the fact that one way to get modern highways throughout the entire country in the shortest time possible is to direct all motor vehicle receipts in registration fees, gasoline and other forms of tax, into highway construction and maintenance channels. If that were done, the total road income—capital which could go back into highway construction—would go considerably above $300,000,000 a year. As it is, on three items alone—Federal excise on passenger cars, motor trucks, and accessories, parts and tires as a group—the total paid to the Government approximates $115,000,000, an amount more than $40,000,000 in excess of the $75,000,000 turned back into Federal aid.

Yellow Tail Lights? Probably

A LIFE saving suggestion, that yellow tail lights replace red ones, except as to the automatic danger signals, is made by a committee of the Society of Automotive Engineers. Changing the lenses would be the only expense. Laws, of course, would have to be changed.

Railways use yellow caution lights, using red only for danger. No doubt early automotive conditions warranted red, and even a red light does not stop the mad onward rush of many motorists now, but probably the engineers have compared the pros and cons mathematically, and

Motor West's guess is that their recommendation will be favored generally and that ere long the red tail light copied from railroad practice and incorrectly at that, will pass into obscurity as did the whipsocket, which in early motor vehicle usage was copied from horse vehicle design.

Bear It In Mind Next Year

THE man who drove his car in the dark but fragrant early morning to Mount Rubidoux, or Hollywood Bowl, or Point Firmin, or Santa Monica Palisades, or any of the many other impressive places in Southern California, on Easter Sunday, and passed through the thrill of the sunrise services, went home a better and gladder man. Many thousands did it, not only in Southern California but elsewhere.

This would be true anywhere, no doubt, and regardless of religious ideas, but the peculiarly beautiful environment of the Southern California celebrations give them extraordinary effect.

Without the motor car they would not be the splendidly attended affairs they are.

Queer Way to Curb Wrongdoing

WHEN a man is to be punished—assuming that he ought to be punished—make the punishment fit the crime. This does not refer to degree of severity, but to kind. If a man be a bandit, and the judge tells him he can continue to be one but must change his name or the brand of the gun he uses, public opinion is likely to be that the judgment is peculiar.

Whether Tommy Milton was or was not deserving of punishment by the American Automobile Association, the ruling of William Schimpf, its contest board chairman, that Milton could continue to compete, but not in the splendid car which he had been piloting, without changing its name, seems peculiar, whether on the books or not.

Would Prefer Commission Control

MOTOR transport men are subject to the same harassing experiences with local taxes and regulations that make electric railway managers' lives miserable, as depicted in an article in this issue. With fair minded men on the state railroad commission, it might be a relief to motor transport men, as well as to the railway men, if both were under the body's control, instead of under that of a lot of various-minded, often ill-informed local officials and politicians. Other points in the article are well worth noting.

Object Lessons Make It Plain

PLAIN proof of the value of motorizing transportation is seen frequently from Motor West's windows, over a considerable area. A fire bursts forth somewhere—in a minute or so the fire department is on its way, and generally what in the horse-drawn days would have been a disaster is checked early.

In such cases the value of minutes, even seconds, is obvious. It makes one realize—only faintly, at that—the tremendous aggregate saving of all kinds that is due to motorized transportation.

Renewed highway activity is indicated by the many news items about it these days.

Pierce-Arrow and La Fayette Merger

Merger of the Pierce-Arrow Motor Car Co. and the La Fayette Motor Co. was determined upon at a meeting of directors of both companies in New York, April 13. Charles W. Nash, head of both Nash Motors Co. and La Fayette Motors, will be chairman of the board, in complete charge of the joint operating forces. The present plan calls for the administration of both concerns by Col. Charles Clifton, chairman of Pierce-Arrow, during the transition period.

Aside from value to the Pierce-Arrow Co. of C. W. Nash's experience and ability as a motor manufacturing executive, consolidation with La Fayette Motors will make possible the utilization of Pierce-Arrow's excessive manufacturing facilities to turn out bodies for both companies. The La Fayette company has had difficulty in obtaining satisfactory bodies for its high grade chassis, and had contemplated erection of its own body plant.

Prices on Seven Cars, One Truck, Up

A tabulation dated April 10, by National Automobile Chamber of Commerce, shows price changes since November 15, 1921. Though there were many decreases, prices were increased on seven models of passenger cars and one make of motor truck. The passenger cars on which increases were made were Chalmers, $100, from $1295 to $1395; Davis, $100, from $1695 to $1795; Dorris (closed), $500, from $6690 to $7190; Franklin, $100, from $2350 to $2450, and $100 (closed car), from $3350 to $3450; Grant, $100, from $1285 to $1385; Handley-Knight, $200, from $2450 to $2650; Oakland (closed), $60, from $1725 to $1785; Roamer, $100, from $2485 to $2585; Templar, $140, from $1985 to $2125. On four models of Gary trucks, prices were increased from $350 to $850, new range being $2100 to $5150.

Akron's new city directory, it is said, will show its population is 200,000, proving it has come back.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24TH, 1912.

of MOTOR West, published semi-monthly at Los Angeles, California, for April 1, 1922.

STATE OF CALIFORNIA, }
County of Los Angeles. } ss.

Before me, a notary public, in and for the State and County aforesaid, personally appeared Geo. M. Schell, who, having been duly sworn according to law, deposes and says that he is the editor of MOTOR WEST and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Post Office Address—
Publisher, Motor West Publishing Co., Inc..............................911 Marsh-Strong Bldg., Los Angeles, Cal.
Editor, Geo. M. Schell............1546 Gramercy Place, Los Angeles, Cal.
Managing Editor, same..Same
Business Manager, same..Same

2. That the owners are: (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Motor West Publishing Co., Inc..............................911 Marsh-Strong Bldg., Los Angeles, Cal.
Geo. M. Schell....................1546 Gramercy Place, Los Angeles, Cal.
F. Ed. Spooner.........................420 Book Bldg., Detroit, Mich.
Geo. W. Schell....................1546 Gramercy Place, Los Angeles, Cal.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is..................
(This information is required from daily publications only.)

GEO. M. SCHELL.

Sworn to and subscribed before me this 1st day of April, 1922.

W. A. JENKINS, N. P.
My Commission Expires Jan. 16, 1926.

Coast Will Fight for Classic

Far West Men and Motors to Be Strong Contenders in 500 Mile Race in Indianapolis, May 30

PACIFIC Coast pilots and cars will contend strongly for shares of the $100,000 purse in the tenth annual 500 mile race on Indianapolis' 2¼ mile brick speedway, May 30. Three of them will use Leach motors, designed and built by Harry A. Miller, noted engineer and vice president of Leach-Biltwell Motor Car Co., Los Angeles. These motors are of the Leach 999 type and almost identical with the stock car motor.

Tommy Milton's special with the Leach motor has had phenomenal success. Milton won last year's Indianapolis race and the first two big races this year. Tommy Murphy, who has been driving a Duesie, will use a Leach motor. Frank Elliott will drive a Leach special at Indianapolis. Last year Ira Vail used a Leach motor there. He is entered this year, but has not named his car.

Harry Hartz, Duesenberg, is another Coast entry. So is Wallie Reid, movie star, whose entry some regarded as a joke; but his Duesenberg awaits him at Indianapolis. Mae Harvey, of Los Angeles, has entered her Frontenac, intended for Jerry Wanderlich, who, however, has bought and entered a Duesenberg.

That makes seven Pacific Coast drivers entered and possibly an eighth for Mae Harvey's car.

So far, Indianapolis entries total 14. The known ones include those mentioned and Ralph De Palma, who will use a Duesenberg; Jules Goux, Ballot; Peter De Paolo, Frontenac; Howdy Wilcox, Peugeot; Eddie Hearne, Disteel-Duesenberg; E. G. (Cannonball) Baker, Frontenac.

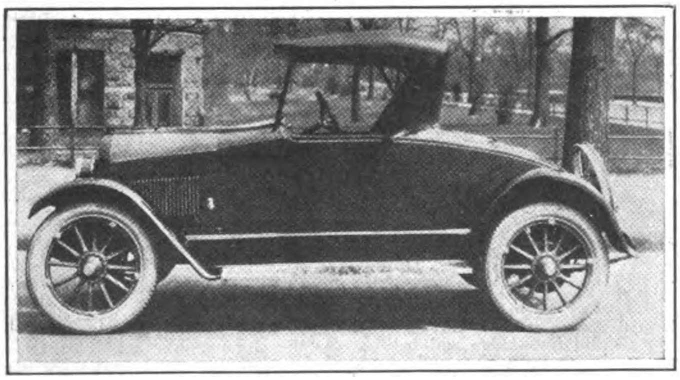
Roscoe Sarles, another Coast entrant, resident of Los Angeles though born in Lafayette, Ind., was announced from Indianapolis, April 22. He will use a Frontenac, not a Duesenberg, this time.

To Use Radio in Indianapolis Race

Pit messages and signals always play a big part in a race. The driver and his mechanic become lost after a few laps on the big oval; there is too much noise to hear each other; and the only touch they have with the world is through the blackboard and flag messages they receive from their pit as they flash down the homestretch.

Wireless telephones on a Ford car will break into big league automobile racing in the 500 mile $100,000 race on Indianapolis' 2¼ mile brick speedway, May 30. The Ford, equipped with a "Fronty-Ford" motor head and otherwise strengthened, has been entered by the racing Chevrolet brothers, Arthur and Louis. The experiment was successful in dirt track races last year. The car will average 89 miles an hour on the speedway and will travel 102 miles per hour on the long stretches, according to the Chevrolets. The little car, pigmy in size compared with the others, has been entered as the "Fronty-Ford." It will be equipped with a wireless telephone receiving set, and radio messages will be dispatched to it from the pits. There will be a small device on the rear of the car to catch the waves. The receiving headgear will be worn by the mechanic, who will deliver messages to the driver. It is hoped in this way to have the Fronty-Ford team the best informed team on the track.

It will be interesting to see the results. T. E. Myers, manager of the Speedway, said this would be the only Ford car permitted to enter the race. He made this concession because of the known ability of Chevrolets as racing engineers.



SPORT MODEL ADDED TO DURANT LINE.

To the line of Durant automobiles there has been added a sport roadster, constructed about the standard Durant Four chassis and definitely suggesting the joys of country club and open road. It is a 2 passenger car with racy, sweeping lines and unusual leg room. The first model, recently on display in New York, is dark blue, with the characteristic Durant striping. A notable feature is the size and utility of its rear compartment. It will close easily over two well-filled golf bags. It would accommodate a small trunk, or the usual gear of a camping tour. With all its capaciousness, this compartment does not interrupt the graceful sweep of the stream line nor give surface indication of its size.

Midwest Engine Co. Refinancing

Confirming news in Motor West, April 15, that to clear titles, etc., to complete reorganization and refinancing of Midwest Engine Co., Indianapolis, receivers were appointed as a technicality, and that the business would go on uninterrupted, it is stated that the whole proceeding is friendly; was started to protect the company; large orders are on hand; the plans contemplate $1,000,000 new working capital; and that most of this already has been subscribed for by stockholders. With the new capital, quick assets and quick liabilities will be practically 10 to 1.

Fine New Hotel for Indianapolis

Prosperous distributors visiting Indianapolis factories will be pleased to know that a new $1,000,000 hotel, to be next to the largest there, will be built at the northeast corner of New York and Illinois Sts.

Calendar of Coming Events

May 1-6—Open Road Week in Los Angeles.

May 7—Speedway Race at Cotati, Calif.

May 12—Dealers' Sociability Run, Fresno to Camp Curry, Yosemite

May 12-13—Seventh Annual Los Angeles-to-Camp Curry (Yosemite) Economy Run.

May 13-14—California Automobile Trade Assn., Secretary-Managers' Meeting, Ben Lomond, Santa Cruz County.

May 30—500 Mile Race, Indianapolis.

June 3—Salem, Ore., State Fair Dirt Track Races, Sanctioned by A. A. A. J. E. Hickey, Manager.

June 19-23—Automotive Equipment Assn. Convention, Colorado Springs, Colo. June 24 also, if necessary.

June 20-24—Summer Meeting, Society of Automotive Engineers, White Sulphur Springs, W. Va.

June 26-27—Annual Meeting Southern Division of California Automobile Trade Assn., Pasadena, Calif.

July 4—Eleventh Annual Automobile Race, Tacoma Speedway.

July 15—Grand Prix Road Race in Alsace-Lorraine, Auspices Automobile Club of France.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in Connection with Brazilian Centenary.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Nov. 11—Armistice Day 500 Mile Race, San Carlos, Calif. Purse $50,000; Citizens' Lap Prize Purse, $25,000 or More Additional.

Changes Its Sales Policy

Kelly-Springfield Tire Company Takes First Step to Eliminate "Store" Features as Antiquated

THE recent move made by Kelly-Springfield Tire Co. in consolidating its general offices in the new building at 250 West 57th St., New York, is indicative of more than merely an effort to organize more efficiently the executive branch of its large business. The truly interesting and significant feature of the re-organization of office arrangements is the fact that the New York branch has been moved to the company's warehouse at 553 West 57th St., a step which is equivalent to giving up the branch altogether, since it has now no display rooms, sales counters or any of the other appurtenances of the usual tire store.

For many years the Kelly Co., in common with other large tire companies, maintained handsome and attractive show rooms. The Kelly Co., however, realized that with the stabilizing of the industry the maintenance of these expensive establishments was a relic of the prosperous days of a rapidly growing industry rather than an economic necessity for a concern manufacturing articles that have become almost staple products.

With the discontinuance of all retail sales—a step which was taken to protect the dealer—the factory branch was deemed an unnecessary expense which only added to the overhead. In cutting out this expense in all cities, which the company intends to do as soon as practicable, a considerable saving will be effected, and it was partly in anticipation of this saving in operating costs that the prices of Kelly products recently were brought down to a competitive basis.

The company intends to establish warehouses in various centers of distribution where railroad facilities are best suited to give prompt service to its dealers, and where it now maintains branches these will be supplanted by offices, which in many cases will be in the warehouses.

There seems to be good reason to believe that this move of the Kelly Co. in being the first to discontinue its branch in the largest city of the country may forecast the attitude of other large tire companies with respect to the future conduct of the industry, in an endeavor to bring the tire business to the same point of economic perfection as that which marks the older lines of trade.

Suit Against National Is Dropped

A suit said to have been filed against National Motor Car & Vehicle Corp., Indianapolis, by an indemnity company against its parts making client's instructions, did not reach court and at plaintiff's request has been withdrawn. Also, National's refinancing, now completed, gives it about $500,000 more working capital. Added to unused proceeds of the $750,000 bond issue sale, the company states it is now in strong position and will be more so when all the bonds are sold. Increased factory production begins at once.

The company started in 1899 and is one of the four survivors among exhibitors at the first Madison Square Garden show, held in 1900.

Much New York Legislation Ahead

More than 70 bills to regulate or tax motorists or their machines have been introduced in New York state. Those urged by the tax commission involve a 1 cent tax on gasoline; basing license fees on car weight, minimum $8; increasing truck fees one-third; revoking operator licenses on conviction for serious offenses; more specific and accurate headlight specifications; registering bills of sale on cars, owners to carry resulting certificates; $500 bond for each city taxicab. New York City comment is that all measures suggest additional burdens on motorists, but none suggest protection from theft.

Lake Line Helping Toward Normal

A competitor of railways between Detroit, Cleveland and Buffalo is the Detroit & Cleveland Navigation Co. Last year it cut all class and commodity rates, including those on automobiles, 15 per cent. Though its expenses still exceed pre-war level, on April 18 it cut automobile rates again, 15 per cent on open cars, 25 per cent on closed ones—to stimulate business, it announced. It is one of the largest carriers of automobiles on the Great Lakes—not only new cars and trucks, but a great many cross-country touring cars, it says.

No More Ford Cuts, Says Edsel

Attending the recent industrial tractor show in Long Island City, L. I., Edsel Ford, president of Ford Motor Co., said no further reduction in prices of Ford cars are contemplated, despite the fact that other small cars are coming into the market as competitors. Mr. Ford said he expected production for this year to reach the high water mark of 1,150,000. Last year's output was 1,038,000 cars and trucks.

Less Unemployment Nationally

President Harding's unemployment conference reported on April 20 that for every 100 jobs there were 160 applicants, compared with 226 in January. Put otherwise, there are jobs for 62 per cent now, compared with 44 per cent then. Based on an estimate of 3,500,000 jobless—declared by many to be little more than half the actual number—this means employment for 630,000.

Cleveland, Like Detroit, Very Busy

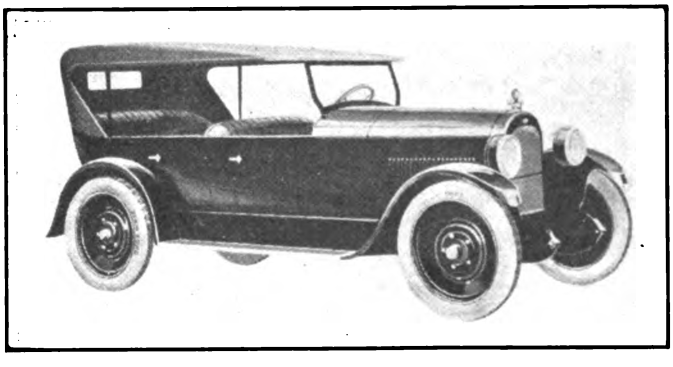
Cleveland automobile factories report steadily increasing operations. The Fisher body plant there, though it has 1,000,000 square feet of factory space, has leased the Briggs Body Co. factory so as to more nearly meet the rush. Cleveland motor accessory plants and steel mills also are becoming very busy.

Prospect Is Quite Pleasing

April experience was that the industry's second quarter this year will beat the first one, and do even better than the second quarter of 1921. One prominent maker declares that a favorable harvest in July will mean the industry will be kept busy well into next winter.

In mid-April, Detroit's public welfare head said indications were that within 30 days no able-bodied Detroiter need be out of work.

On April 17, Goodyear tire output was increased from 22,000 to 24,000 a day—work for 1000 more men.



A "LITTLE BROTHER" ADDED TO THE DAVIS LINE.
George W. Davis Motor Car Co., Richmond, Ind., recently announced the phaeton, model 71, a smaller and lighter six, priced $1195 factory. It has the same rakish, powerful appearance as the larger models. It has the latest Continental 6Y motor, Timken axles, Delco self-starting ignition, and so on. Wheelbase is 114 inches, weight about 2500 pounds.

Stephens-Kelly Bill Urged

Automotive Equipment Association at New Orleans Meeting Told Not to Sleep at Switch

At its "mid-convention" meeting, in New Orleans, March 30-31, Automotive Equipment Association was strong for urging all and sundry to exert pressure on Congress for the Stephens Kelly bill, said to be intended to clarify uncertainty as to rights of makers to control prices, etc., and so relieve business of a handicap. Without such clarification, legal battles like the famous Mennen, Beechnut and other cases arise.

Members' failure to respond to official bulletins and letters from Commissioner Webster, on important matters like the foregoing, was brought up forcibly, and the profit in co-operation in such things shown.

Backing a plan started by replacement makers informally during the Chicago convention appeared to mean the association guaranteeing its members' products, so the plan was referred to a subcommittee of the board, presumably to be shelved.

The question of the expediency of selling to large corporations, such as oil companies, was discussed and referred to the manufacturers' division of the coming Colorado meeting.

Copy No. 1 of the Universal Catalog was presented and a rising vote of praise given Chairman Von Elm, of the catalog committee. A committee will procure a suitable token to present to him for his sacrifice of time and labor on this imposing piece of work.

Chairman Hall of the standardization committee reported. A handbook, containing data on standardization, elimination, and general statistics, will be out by or before the Colorado meeting.

The meeting tabled, as inexpedient, the matter of extending its credit department's work so as to obtain ratings, etc., on customers from members' books, to show debtors' standing.

It was decided the next show, in Chicago's Coliseum, will be member exhibitors only; and the space rate will be reduced to $1 a square foot.

New Orleans' temperature was about 80 and was considered warm. Also, it rained—but only at night. The summer convention, June 19-23 (June 24 also, perhaps), will be in Colorado Springs, Colo., and the 1923 summer convention will be in the East, perhaps New England.

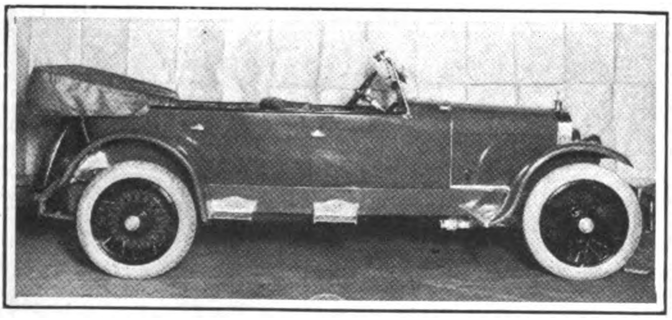
Western Canadian Conditions

There are slightly less than 9,000,000 people in Canada, and approximately 500,000 motor vehicles. This means one motor vehicle to every 18 inhabitants. The report of the Dominion's bureau of statistics shows that in the last year more than 60,000 new motor vehicles have been licensed.

"The most surprising increase," said a provincial official, "occurred in the Western provinces. Saskatchewan, which but a comparatively short time ago was a playground for the buffalo, today has 62,958 motor vehicles, mostly automobiles. Manitoba has 40,430, Alberta 38,750 and British Columbia 31,000.

"Western Canada's automobiles are not all pleasure cars. On the contrary, thousands are used for the quick transportation of farm produce to markets. In the principal producing seasons nearly every car, big and small, is equipped with trailers for the movement of grain, fruit livestock and dairy products. The Western provinces are being settled by small farmers, who are pouring into the fertile region along the transcontinental lines of the Canadian National Railways. They are going in for mixed farming. Dairying is favored because of the quick, certain returns. Good roads and the automobile have almost eliminated distance, and they have solved the small farmer's problem of moving produce to market.

"Prosperity of Western farmers in recent years has resulted in the increased use of all kinds of cars. Canada is taking advantage of this growing demand. Automobile production in Canada, according to the latest computation, was valued at $137,420,351 in 1920, an increase of $37,000,000 in 12 months. Investment in the industry is placed at $53,906,506."



GOODSPEED CAR, IN WHICH PISTON VALVES ARE USED.

The Goodspeed car, made by Commonwealth Motors Co., Joliet, with office headquarters at 1509 Michigan Ave., Chicago, speaks for itself as to exterior smartness. Mechanically, without being radically different, the use of piston valves instead of poppet or sleeve valves is distinctive in it, and is said to eliminate customary frequent adjustment and grinding. Simplicity in construction also is achieved, and the entire valve assembly is guaranteed for life. Bore and stroke are of large dimensions, and after long tests it is stated this motor produces more pulling power, with increased speed, than more conventional motors of equal dimension.

Straits Settlements Outlook Better

During 1921 the Straits Settlements market for motor vehicles was exceedingly dull, due to the slump in rubber and tin, and there was practically no importation of motor trucks. The current year undoubtedly will witness somewhat better conditions, says Consul McNiece, at Penang.

A great deal of the hauling in the Straits Settlements is done by ox carts and hand carts, a very tedious and slow method but comparatively cheap. While there are excellent roads throughout the Colony and the Federated Malay States, those on the private estates are not fit for the use of motor trucks. Many hired cars traverse the roads, carrying both passengers and produce of all kinds. As most of these cars are in a disreputable condition it would appear that they might be superseded by motor trucks. None of the latter, however, have been introduced during the past year. At present there are only about 50 motor trucks in Penang.

Japanese Automobile Literature

The extent to which the Japanese are interested in motor vehicles is reflected in the automobile literature of the country. Examples which have been transmitted to the automotive division of the U. S. Department of Commerce by Automotive Trade Commissioner Irvine, besides three instruction manuals used by a Japanese automobile correspondence school, on the automobile, the motorcycle, and electric ignition, help to break down ignorance in connection with the internal combustion engines. The pupils of this automobile correspondence school, after acquiring the knowledge contained in the books furnished, have a course in a garage and then are promoted to the chauffeurs' class. Among the publications is also a copy of Motor, the best of the Japanese automotive trade papers, with an original circulation of 10,000. Reading this publication should result in valuable suggestions for American automotive manufacturers, says Mr. Irvine.

Another Steamer, in $3000 Class

It is reported a steamer, in the $3000 class, is to be produced in Detroit by Barlow Steam Engineering Syndicate, the car being designed by L. P. Barlow.

Detroit produced more than 160,000 cars in March.

Foolish to Wait on Prices

Quaint Philosophy and Hard Logic Put Against the Tendency to Delay Purchasing New Cars

Part of the following is by the editor of Anderson Smileage, the remainder by J. W. Anderson, general manager of Anderson Motor Co., Rock Hill, S. C.

JIM is a nice feller, but he is a natural-born price cutter. Ever since we can remember, he has been waiting for things to get cheaper, and as a consequence he never buys very much. He makes his wife wait until prices are lower, and she's been the poorest dressed woman in our village for 16 years.

Jim owns an automobile. We don't recollect just what year it was built, but it has the general, first class appearance of a cross between an ice wagon and a freight depot. It takes him 3 hours on a cold morning to start it, and then it only runs long enough to rattle the license number off.

"I'm agoin' to buy me a new car just as soon as prices come down," Jim remarked 7 months ago.

"'Pears like they have come down already about as low as they ever can—if manufacturers are to sell them at any profit at all," a friend remarked. Jim winked.

"You wait," sez he, he says, "I'm wise. Those robbers will spring another price reduction soon. I want to be in on the bottom price. They can't skin me."

And so time passes. We might be impressed if it wasn't for the fact that everything Jim has is shoddy, from his house to his wife's clothing. He doesn't like it a bit when somebody makes honest profit.

Just about when he is ready to buy a car, the prices will go up again, and he'll have to rattle along on that omnibus of his another year.

Take our word for it, there won't be any spectacular decreases in the price of good motor cars from this on. You can't expect to get 'em for nothing, can you? Jim, and all the other Jims like him, have the wrong idea. Don't look for bargains, don't talk price—talk the quality of the thing you are buying. It sure is the cheapest in the end.

The belief that price bottoms have been reached in the automobile industry is becoming more and more widespread. Much evidence to that effect is at hand and there are even visible signs of a rebound upward.

It is bound to come. Cars have not been replaced during the last year and a half as fast as they have been wearing out. The new market has been quiet as well. Business in general has been improving gradually and will continue to do so. And as long as old human nature remains the same, people who can afford to ride are not going to walk. And then, too, the motor car has become more and more a household necessity, especially in the country and the suburban districts. It has become quite a business necessity as well.

Now the manufacturers have not been producing very far ahead of sales. Dealers are not stocked up with new cars. A lot of the older used cars will be scrapped.

All of which means nothing more nor less than this: that there will be a shortage of cars this spring—and spring is already upon us. And the answer regarding prices is that they are not going down any farther, with a good betting chance that they will go up.

The wise buyer will buy now. So will the wise dealer. And the dealer who wants to do his customer a good turn will sell him now.

To Test Gravel for Road Use

To aid the Bureau of Public Roads in giving particular attention to the use of local material for road construction wherever possible, a simple, portable apparatus has been devised for testing gravel to determine its suitability for concrete. The device consists of two steel balls arranged so that a piece of gravel can be placed on top of one of the balls and the other ball allowed to fall from different heights and strike the gravel. The height of fall required to break the gravel is an indication of its suitability to withstand the blows of traffic.

Heretofore there has been no satisfactory test of gravel as there has been for stone, with the result that in some instances more costly material has been used when a suitable gravel was available close at hand. Along this line the bureau is conducting wear tests on concrete made of many different materials to determine just how far it is safe to go when the quality of material is doubtful.

New Motor Declared Revolutionary

H. H. Elmer, of Syracuse, N. Y., has designed a motor for which 300 miles per gallon of fuel costing 5½ cents is claimed. Putting it otherwise, a 1 cylinder, 3 horsepower motor can run 18 hours on 1¼ pints of fuel oil which retails at 5½ cents a gallon. The fuel is vegetable, mineral or animal.

The engine has 64 parts, including the screws. It is declared a discovery rather than improvement. It involves 371 distinct points, each along a new line of engineering thought. Internationally known engineering experts are said to believe it will revolutionize things. Mr. Elmer says it can be sold for 60 per cent of the price of engines of any type in the same class now being sold.

Three full size models were tested in Syracuse, April 27. A committee including John Wilkinson, who invented the Franklin air cooled motor, is to arrange for immediate development of the Elmer idea.

In Chicago the "Corona-Car," dubbed after a diminutive typewriter, is a novelty. It has four wheels, two single seats, tandem, a canopy, and it is propelled from behind by a Smith motor wheel. On top of this wheel is a small gasoline tank, and it is equipped with a motor. It has been used more or less—rather less, recently—to propel bicycles.

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Torbensen Bought by Eaton

Former Head of Famous Axle Concern Says Future Assured by Orders and Plentiful Capital

CLEVELAND interests headed by J. O. Eaton, former president and general manager of Torbensen Axle Co., have acquired the interest formerly owned by Republic Motor Truck Co. and have reorganized the company.

Coincident with this announcement comes the news that within a recent two weeks orders with shipping specifications attached were received which bring April production over $300,000.

Mr. Eaton and his associates, constituting substantially the same group of men who directed the company in the period of its greatest prosperity and made it, it is said, the world's greatest producer of truck axles exclusively, announce that the company has been placed in very satisfactory financial condition. As reorganized, it has only one class of security outstanding, 80,000 shares of common stock, holders of the old preferred receiving four shares of the new common for each share of preferred. A block of the new common has been sold to provide necessary funds and will, it is understood, be offered privately.

Among the many spectacular stories of growth which the automobile industry affords, few are more remarkable than that of Torbensen Axle Co., which was organized in a very small way in Newark, N. J., in 1911, and was moved to Cleveland in 1915. Something of this remarkable growth is indicated by the production and sales figures, which show that in 1913 the company produced only 222 rear axles, while in 1920 its production totaled 21,798 rear axles and 9952 front axles, for a total sales value of $5,364,000.

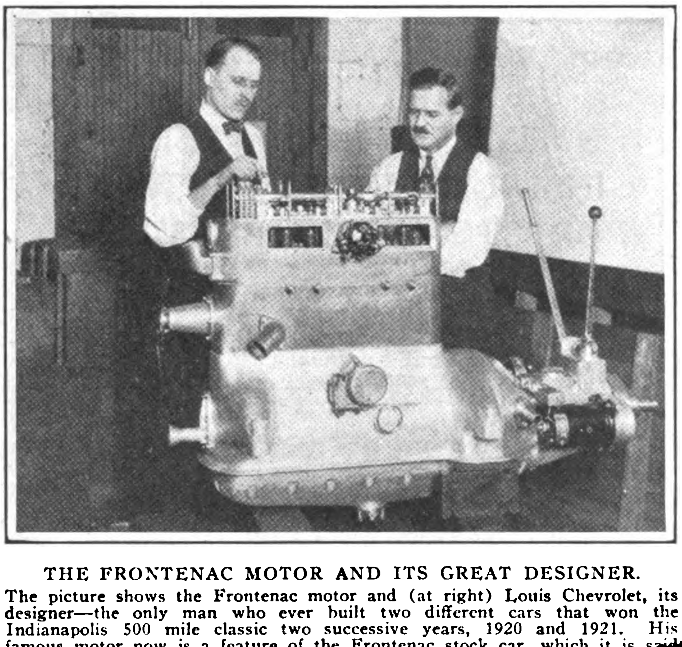
The company now manufacturers, each year, it is stated, about one-sixth of all truck axles sold in the United States (exclusive of Ford) and manufacturers more internal gear drive axles than all other manufacturers combined. Among its principal customers are International Harvester Co., Olds Motor Works, Republic Motor Truck Co., Graham Brothers, (who with Dodge Brothers manufacture the Graham-Dodge truck), Commerce Motor Car Co., Avery Co., Martin-Parry Co., Velie Motors Corp. and Case Plow Co.

The company is reputed to have more axles running under trucks than any other one manufacturer, and due to this, it states, its business in replacements and parts alone is capable of operating its plant approximately half of capacity.

The company's balance sheet after reorganization shows fixed assets valued at $1,421,735, net current assets of $749,976, and total net assets, exclusive of patents, of $2,257,815, or more than $28.15 per share.

Average annual earnings for the five years ending December 31, 1921, before Federal taxes, amortization of patents and interest charges, but after depreciation, adjustment of inventory to market and loss on purchase commitments, were $451,564, or $5.64 per share of the new common stock. These figures include a write-down in inventory of $491,020 taken in 1920 and 1921. In 1921, despite adverse business conditions, the company made a small profit.

The management reports operations at a substantial profit for the first four months of the current year, which will be increased greatly by the recent additional business. At the rate of increase shown since January 1, it will be only a short time until the plant is operating at capacity.



THE FRONTENAC MOTOR AND ITS GREAT DESIGNER.

The picture shows the Frontenac motor and (at right) Louis Chevrolet, its designer—the only man who ever built two different cars that won the Indianapolis 500 mile classic two successive years, 1920 and 1921. His famous motor now is a feature of the Frontenac stock car, which it is said will list at about $2000 and which will be marketed by Frontenac Motor Co. of America, Indianapolis. Allan A. Ryan, great financier, heads the company. The motor has very distinctive features, not freakish but very useful. It is driven by a double silent chain fitted with automatic takeup sprockets. Camshaft construction and valve actuating mechanisms are in a separate compartment from the valves, therefore are lubricated more easily, it is claimed, than other types of overhead camshaft motors. There is no fan belt to loosen—the fan is driven by the relay sprocket-shaft of the driving chains. Turning a valve, which cannot be knocked off, drains the crankcase of oil. Carburetor is mounted directly on the side of the crankcase; and so on. The Frontenac chassis also has features born of lessons learned in racing. There are no unnecessary rods or encumbering devices. Pressure on one foot pedal actuates four wheel brakes at once. Front and rear springs are exceptionally long and flexible, with two reversed top leaves for the rear springs. And so on. The motor is a 4 cylinder with detachable head. Bore and stroke, 3⅜x5½. S. A. E. horsepower, 18-23; actual, 60. Displacement, 196.8 cubic inches.

Plant Acquired for Frontenac

Frontenac Motor Co. of America, Inc., have acquired the plant owned by Federal Motor Co. and formerly occupied by Empire Motor Car Co., in Indianapolis. Work will start immediately to prepare the buildings for Frontenac production, and sample cars are promised for May.

Frontenac Motor Co. is incorporated for $1,000,000 under the laws of Delaware and comprises both New York and Indianapolis capital. Allan A. Ryan, of New York, is to be chairman of the board of directors. Common stock recently was entered for trade on the New York curb market. Other New Yorkers interested include Kenneth R. Howard and William Rand, Jr., and Indianapolis is represented by William N. Thompson, president and general manager of Stutz Motor Car Co., and Louis Chevrolet, designer and builder of the famous Frontenac racing cars.

The new car will have overhead camshaft, 4 wheel external contracting brakes and front and rear bumpers which will be a part of the frame, and other notable mechanical features. Mr. Chevrolet says the motor has been designed to handle present-day gasoline so well that an average of 20 miles per gallon can be maintained, yet the experimental cars have attained speeds of 75 miles per hour in track tests.

Three body types will be offered, a 4 passenger touring model, a 2 passenger roadster and a 4 passenger enclosed car. Material orders are being placed and about 1500 men will be employed when the plant reaches maximum production.

The new factory has 100,000 square feet of floor space and includes a 2 story brick building, to be used for offices; a large sawtooth structure and a 3 story concrete building for the factory proper.

Ver Linden and Durant Separate

According to recent advices, Edward Ver Linden is no longer president of Durant Motors Co. of Michigan, having been succeeded by C. F. Daly, of New York, assistant to W. C. Durant. Differences are said to have existed between Ver Linden and Durant over policies.

Yellow Tail Lights Urged

Why Red Is Used Now, and Dangers It Involves, Stated by Society of Automotive Engineers

THE Society of Automobile Engineers presents the advisability of using yellow tail lights instead of red ones, so as to minimize the danger of motorists confusing automobiles lights for lights placed along highways to indicate dangerous road conditions. Many accidents, it is pointed out, occur owing to motorists being confused in this way. Recently, in Chicago, a driver not familiar with the road, was following another late at night. The first car crossed a river drawbridge, which swung open immediately afterward. The red warning light on the light "lazy-tong" gate, that swung across the road as the drawbridge opened, closely approximated the position of the tail light of the first automobile. The short section of bridge between the gate and the open draw was all that prevented a serious accident.

The red light on the rear of railroad trains probably is the origin of the red tail light of automobiles. A comparison of the reasons for each, however, will show that the use of the red automobile tail light is not logical and, in fact, even dangerous. The railroad train operates on a track and the rear end of that train is dangerous because a train following cannot turn out to avoid the preceding train. As automobiles do not operate on tracks, an automobile following another generally can turn out and pass. It will thus be appreciated that the rear end of an automobile is dangerous only when it is slowing down or standing at the roadside. The use of red lights in automatic or manually operated stop signals for the rear therefore is logical.

The members of the passenger car and motor truck standardization committees of the Society of Automotive Engineers, national engineering society of 5000 engineers and executives of automobile and other automotive manufacturers, have studied this proposed change and generally approve of it. The fact, however, that the use of red tail lights is required by law in many states will mean that the change to yellow tail lights cannot be made until the laws in these states are revised.

It will of course take some time to bring about a complete change, but once its wisdom is appreciated by motorists, legislators will see that the state highway laws are revised to permit the change. The use of existing tail lamps will not be affected, as it will be possible to obtain yellow lamp glasses to replace the red ones.

The use of yellow as an automobile tail light will have an exact parallel in railway operation, inasmuch as yellow is used by the railroads as a caution light. This is really what the tail light of an automobile is intended to be, to caution those behind.

Lincoln Motor Car Co. Incorporated

Capitalization of the newly formed Lincoln Motor Car Co. is $15,250,000, the $250,000 being common stock at $100 a share. All but two shares are held by Edsel Ford. One share each is held by Henry M. and Wilfred C. Leland.

April 17, the Government filed suit in Detroit against Detroit Trust Co., receiver for Lincoln Motor Co., for $9,188,561, claimed to have been overpaid to Lincoln Co. on war contracts.

Argentina Imports Reflect Improvement

The demand for moderate and low priced motor cars in Argentina is improving, says a cable to the Department of Commerce from Commercial Attache Feely at Buenos Aires. March imports from the United States of passenger cars, not including Ford, totaled 301, chassis 3, and motor trucks 3, as against 42 passenger cars, 28 chassis and 8 motor trucks from Europe. 216 cases of accessories reached the country. 64 motor cars of American and 22 of European makes were imported during the corresponding month last year.

Valuable Import, Export Figures

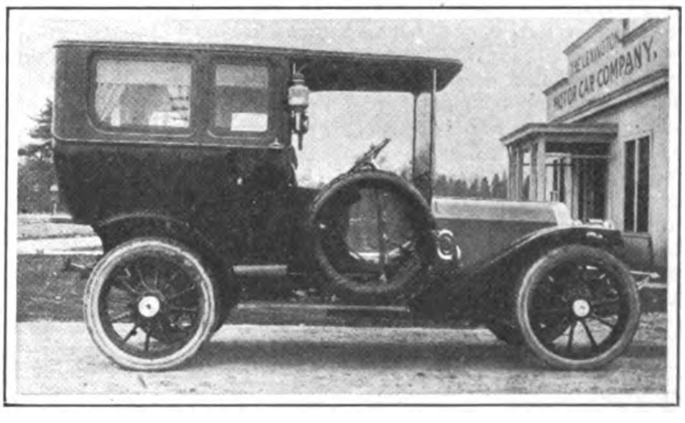
In 1921, world international trade totaled about 34 per cent less than in 1920, in stated value, according to O. P. Austin, statistician of National City Bank of New York. Accurate comparison is difficult, due to exchange fluctuations, but it happens that in the 25 countries for which 1921 figures are available, fluctuation has been less than in others, enabling the following comparison, expressed in millions of dollars:

	Total Imports Million Dollars			Total Exports Million Dollars		
	1913	1920	1921	1913	1920	1921
Argentina	407	850	612‡	467	995	648‡
Australia	388	719	584	365	676	618
Belgium	975	2,490	1,949	717	1,710	1,380
Brazil	327	1,142	923	316	957	934
Canada*	670	1,337	799	356	1,303	817
Cuba	132	574	356	165	783	278
Denmark	229	842	434§	171	486	390§
Egypt	138	506	274	157	423	180
Finland	96	699	697	78	562	652
France	1,642	9,631	4,536	1,327	5,192	4,169
India Br.*	522	1,572	1,354	782	1,420	1,091
Italy	702	3,069	3,724§	483	1,505	1,733§
Japan	363	1,165	787	315	971	612
Netherlands	1,575	1,340	901	1,239	684	551
New Zealand	108	157	328	111	247	235
Norway	148	684	414§	102	523	201§
Philippines	56	149	116	54	151	88
Siam*	28	52	59	30	65	34
Spain	239	271	243	194	198	156
Sweden	227	904	339	219	615	289
Switzerland	371	818	443	266	633	350
Un. S. Africa	203	461	255¶	323	396	284¶
Un. Kingdom	3,208	9,405	5,289	2,556	6,494	3,422
United States	1,793	5,278	2,509	2,450	8,080	4,379
Uruguay	51	90	89§	65	84	74§
Total	14,598	44,205	28,014	13,308	35,152	23,565

* Fiscal year figures. † Includes gold. ‡ Estimate by U. S. Dept. of Commerce. § December estimated. ¶ November and December estimated.

S. A. Miles, show manager of the National Automobile Chamber of Commerce, has sailed for Europe where he will investigate conditions, with particular reference to future sales of American motor cars and trucks.

The American Automobile Association, headquarters Albee Building, Washington, D. C., offers $25 for the best name to call jay drivers by. The contest closes May 15.



THE FIRST LEXINGTON CLOSED CAR EVER PRODUCED.

In front of the original Lexington factory, in Lexington, Ky., in 1908, was photographed the first Lexington closed car ever produced. It is in service still, in the old home town, as a taxicab, the property of a negro, and at the beck and call of Darktown aristocracy. How many thousands of miles it has covered would be hard to estimate. Lexington cars were first marketed in 1908, in the bluegrass city. In 1910 the plant was moved to Connersville, Ind., and soon afterward the family of Frank B. Ansted, now president of Lexington Motor Co., acquired control. Today it is Connersville's leading industry and one of the largest plants in the country.

Highway Matters

To Serve As Object Lesson

PLANS have been received by the Bureau of Public Roads, United States Department of Agriculture, for the "Ideal Section" of road to be constructed on the Lincoln Highway in Lake County, Ind., this summer. The designers of this road intend to produce in it their vision of what the main highways of the country must be in the future.

The plans submitted by the state highway department of Indiana show that the section will be nearly 1¼ miles in length and will be placed in the middle of a 100-foot right of way. The roadway is to be 40 feet wide and provision is made for the use of concrete, bituminous concrete, or brick sections with 5 foot gravel shoulders on each side. Each type of surface is to be of a thickness calculated to withstand heavy traffic. Night travel will be made safe by electric lights 35 feet above the roadway and at suitable intervals on one side of the road. All electric wires will be underground.

For pedestrians a 5 foot gravel sidewalk will be placed in one of the 25 foot strips of parking which are to be on each side of the road, and the parking will receive effective landscape treatment. It is not thought that present traffic justifies the width of roadway to be built, but rather it is intended as an object lesson for the future, and the traffic studies to be made on it will be valuable in settling many questions as to the relation of traffic density to road width, the best methods of traffic regulation, and other problems that are becoming more important each year. Federal aid will be granted on this highway at the rate of $20,000 a mile.

Highway Fees, Franchises and Signs

The program of the annual meeting of the National Highway Traffic Association, which is to be held May 12, at the Automobile Club of America, is announced by President Arthur H. Blanchard. Among the subjects listed are traffic safety, regulations governing speeds, weights and dimensions of motor trucks and trailers, license fees and highway franchises.

The national chairmen who have been asked to make reports are: Elmer Thompson, secretary Automobile Club of America, on uniform highway signs; Herschel C. Smith, assistant professor of highway engineering, University of Michigan, on traffic capacity and widths of highways outside of municipalities; H. Eltinge Breed, consulting engineer, New York City, on the status of the construction of highway curves and recommended practices to increase traffic safety; F. W. Fenn, secretary national motor truck committee, National Automobile Chamber of Commerce, on highway transport franchises; Tom Snyder, secretary National Association of Commercial Haulers, on highway transport clearing houses; George H. Pride, president Heavy Haulage Co., New York City, on regulations governing speeds, weights and dimensions of motor trucks and trailers; and Henry G. Shirley, roads and sanitary engineer, Baltimore County roads and sewage department, on license fees and motor vehicle taxation.

Safer Views, Wider Roads Wanted

Vigorous protest against further marring the beauty of American highways, and interfering with safety by obstructing the view of railroad tracks in the vicinity of grade crossings with large advertising signs, was voiced in a resolution adopted by the annual convention of the Asphalt Association, national organization of paving producers and contractors, at the National Association Building in New York City.

Bearing in mind a severe criticism of the dangerously narrow width of American roads by Joseph R. Draney, president of the association, in his annual address, the convention also urged a minimum width of 24 feet for highways serving large cities. "I have ridden over more dangerous roads in the vicinity of New York," said Mr. Draney, "than one will find, for instance, in the whole of England."

Other resolutions adopted by the convention urged that President Harding take such steps as are necessary for the United States to become a member of the International Good Roads Congress; demanded a reduction in freight rates on asphalt and other roadbuilding materials so as further to reduce the cost of highway construction; and expressed vigorous opposition to a tariff on crude oil in view of the fact that 60 per cent of America's supply of asphalt is obtained from Mexican petroleum, and in view of the further fact that asphalt enters not only into 60 per cent of the roofing materials used in the United States but into practically every type of street and road paving.

"That American cities are making tremendous strides in street paving," said Mr. Draney, "is indicated in reports from city engineers which show that over 30,000,000 square yards of asphalt equivalent to 1750 miles of pavement 30 feet wide, were laid on city streets last year. On state highways 23,000,000 square yards were laid, and the area laid on county and district roads brought the total for 1921 up to 68,000,000 square yards—enough to build two roads, each 18 feet wide, the one extending from Augusta, Me., to San Francisco, and the other from Augusta to New Orleans.

Road Material Types Much Changed

In the last 10 years there has been a great change in the type of road suitable for traffic conditions on main traveled highways. In 1910 plain and surface treated macadam were considered among the highest types of paving for country roads and a large percentage of the mileage was of the two types. There was a small mileage of brick and concrete and a somewhat larger mileage of bituminous macadam, but the plain and surface treated macadam were the predominant types of hard surface roads. How great the change has been is shown by figures recently issued. On Federal aid roads completed, between 1916 and 1920 only 2.9 per cent of the total area paved was plain and surface treated macadam. The types that formerly constituted such a small part of the mileage were as follows: Bituminous macadam, 3.1 per cent; bituminous concrete, 6.3 per cent; cement concrete, 19.3 per cent; and brick, 4.1 per cent.

Pro and Anti Road Campaigns

Under the above heading, Literary Digest recently presented two views, one by a writer in Engineering and Contracting, of Chicago, in which Michigan Roads and Forests also was quoted, the other by the editor of Engineering News-Record, of New York.

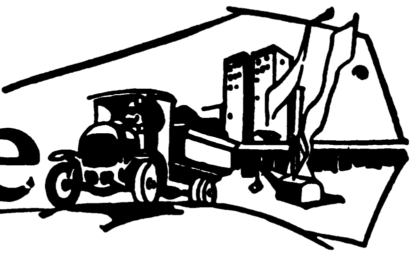
In the Chicago article the public is told that waiting for lower roadbuilding costs is foolish; that materials and labor are down, and that the prospect is upward. The New York editor joins with the American Automobile Association in its belief that there should be a weeding out of "Yankee Doodle Highway Associations," meaning boosting projects in which professional promoters fatten off funds obtained from gullible enthusiasts.

Roadbuilding Employs 114,325 Persons

According to statistics given out by the American Road Builders' Association there are 114,325 persons engaged in road building work. There are 80,000 federal, state, town, and county highway officials; 7000 road contractors; 2000 bridge contractors; 15,000 civil and highway engineers; 10,000 automotive and chemical engineers; and 325 geologists.

Wayne County, Mich., in which lies Detroit, claims to lead the country in modern highways.

The Car of Commerce



On Need of Motor Transport

California Association Figures Show Uneconomic Legislation Would Hit Farmers and Public

Motor West is pleased at continuing to receive evidence that the recently formed California Motor Transport Association, headquarters Fresno, really is active in giving motor truck interests the representation that is given motorists generally by the state's two large automobile clubs, and that obviously its aim is not to grab everything in sight, regardless of other interests. It is for fair motor truck regulation, and for uniformity of such regulation throughout the state.

By **W. L. MATLOCK**
Vice-President California Motor Transport Association, and District Manager Union Oil Company at Fresno.

PRACTICALLY 75 per cent of all oils and greases used for pumping plants and tractors by the farmers of California are transported by motor trucks, and the value of this medium of transportation should not be overlooked when measures which will impair economic motorized transportation are enacted.

The enactment of weight laws which would curtail the operation of trucks in the delivery of oils and greases would make it incumbent upon the farmer to travel many miles for these commodities which are now delivered at his door, and, as a consequence, the price of his farm products would undoubtedly be increased to the consumer.

This is but one of the many angles of the transportation problem which is now facing the citizens of California. In its solution the California Motor Transport Association, comprising shippers and persons indirectly interested in motorized highway transportation, as well as truck and transfer men, is carrying on investigation to determine the economic medium. The association is for the most rigid enforcement of present laws and ordinances governing speeds and weights.

We believe flagrant violation of the law in overloading trucks should be stopped, and severe penalties meted out to those operators who endanger life and limb by reckless driving upon our highways. In the attainment of these objects, this association is seeking the enactment of a uniform state vehicle law so that this new and gigantic industry may be regulated properly in the interests of the people of this state. Proper regulation of the motorized highway transportation industry is necessary both for the preservation of economic motor transport and for the protection of California's highways.

Figures Show Long-Haul Prospects

The United States is now in a period of great highway development, and in a few years many roads which now carry only local traffic originating largely within 5 or 10 miles of the road will be carrying a large percentage of through traffic, much of it coming from outside the state. This is the opinion of officials of the Bureau of Public Roads, United States Department of Agriculture, based upon the report of two traffic censuses taken by the bureau in co-operation with the state highway department of Connecticut.

The roads selected were part of a fairly complete system of highways. The first census showed an average of 2907 passenger cars and 281 trucks passing the recording station a day; and the second, 3832 cars and 511 trucks. Forty-seven per cent of the cars came from without the state. Drivers were questioned as to the length of travel for the day, and results showed average figures of 70 miles and 52.4 miles for the two censuses.

The average haul for truck traffic was 47.5 miles, some of them hauling a distance of 250 miles. Officials point out that traffic of this nature has developed in a period of something like 10 years on a road which prior to 1910 carried almost entirely local traffic. It must be concluded, therefore, they say, that roads which now are being improved to form part of through highway routes should be designed to take care of a great deal more than the local traffic.

From the Railroad Man's Angle

At El Centro, Calif., April 20, "The Railroads' View on Auto Stage and Truck Competition" was the subject of a talk before the Rotary Club at its meeting in Barbara Worth Hotel, by J. T. Saunders, general freight agent of the Southern Pacific.

"We have not made, nor do we contemplate making, any general reduction in our class rates with the idea of meeting truck competition," Mr. Saunders declared, in explaining that railroads were forced to submit proposed rate changes 30 days in advance to the railroad commission, whereas truck operators regulated their own rates.

"The railroads do not oppose the building of highways nor the use of them by truck lines, but they do rightfully insist that such transportation companies, given the use of such roadbed facilities as a subsidy from the Government, pay proportionate taxes," he said.

"To equalize competition between the railroads and commercial automobile lines and companies operating motor vehicles for hire should pay (1) a charge for the use of the highway as a roadbed, this having been provided for them out of public funds; (2) a charge for that part of the highway maintenance cost that may properly be attributed to operation of truck and bus lines; (3) a tax equal to that being paid by the railroads."

Truck Men to Make Radiophones

Commerce Radiophone Co. has been formed as a subsidiary of Commerce Motor Car Co., Detroit, maker of Commerce trucks, by Walter E. Parker, president, and other officers of the company. Production and deliveries have been started. Development of the radiophone as an auxiliary to automotive manufacture is regarded as one which may be taken up by other companies as a means of utilizing some of of the present unoccupied factory space. General Motors Corp. expects that some of the factory buildings it is offering for sale will be taken over by radiophone companies.

Smith on N. A. C. C. Committee

Frank E. Smith, president of Republic Motor Truck Co., Alma, Mich., has been added to the membership committee of the motor truck committee of the National Automobile Chamber of Commerce.

Gosh! Another whack at the heavy truck! One is said to have been the direct cause of a landslide in Topanga canyon, near Los Angeles.

Moving Day Terrors Ended

Details of Indianapolis - to - New York Eight-Truck Train Haul Reveal Railway Inefficiency

MOVING DAY—what a nighmare it always has been. Unfortunately, it could not be confined to one day, but covered many days. If the moving was from one city to another the time required for this most distasteful of all household work might run into weeks.

First, the packer. Everything had to be packed or crated. Then the mover came, and hauled the goods to the freight station. Those who have moved from city to city can well remember how the old freight agent would inspect the various articles, instructing that this item or that item had to be uncrated, the goods repacked and recrated to comply with some rule on size. After that the goods were loaded, along with other less-than-carload shipments. After the car was loaded and sealed, the engine switched it around awhile, and finally it found its place in a long string of freight cars. Probably by this time the household goods and other less-than-carload shipments were pretty thoroughly mixed.

The car finally reached destination. Maybe the household goods were transferred a time or two en route. Of course, it was necessary to load them on a truck or van at destination and haul them to the new home. In turn, they must be unpacked and put in place. What a job this was! Usually some things were missing, others broken, and most likely the very best of the furniture had a big scratch right across it.

W. B. Hiner, general manager of Red Ball Transit Co., Indianapolis, had realized that the way to change moving day was really to move. He conceived the idea of placing the goods in a truck and taking them directly to destination, regardless of distance.

After working out his plans, and organizing the company, Mr. Hiner visited the factory of the United States Motor Truck Co. to see if they could supply the equipment to make this new business a success. He was convinced it could, and left his initial order for 3-ton trucks equipped with special, fully enclosed van bodies.

All equipment of his company is U. S. motor trucks and today, bearing the Red Ball sign, they are on the highways of Illinois, Wisconsin, Iowa, Missouri, Indiana, Michigan, Ohio, Kentucky, West Virginia, Pennsylvania, Maryland, Delaware, New Jersey and New York. The Red Ball Transit Co. has offices in the principal cities of these states.

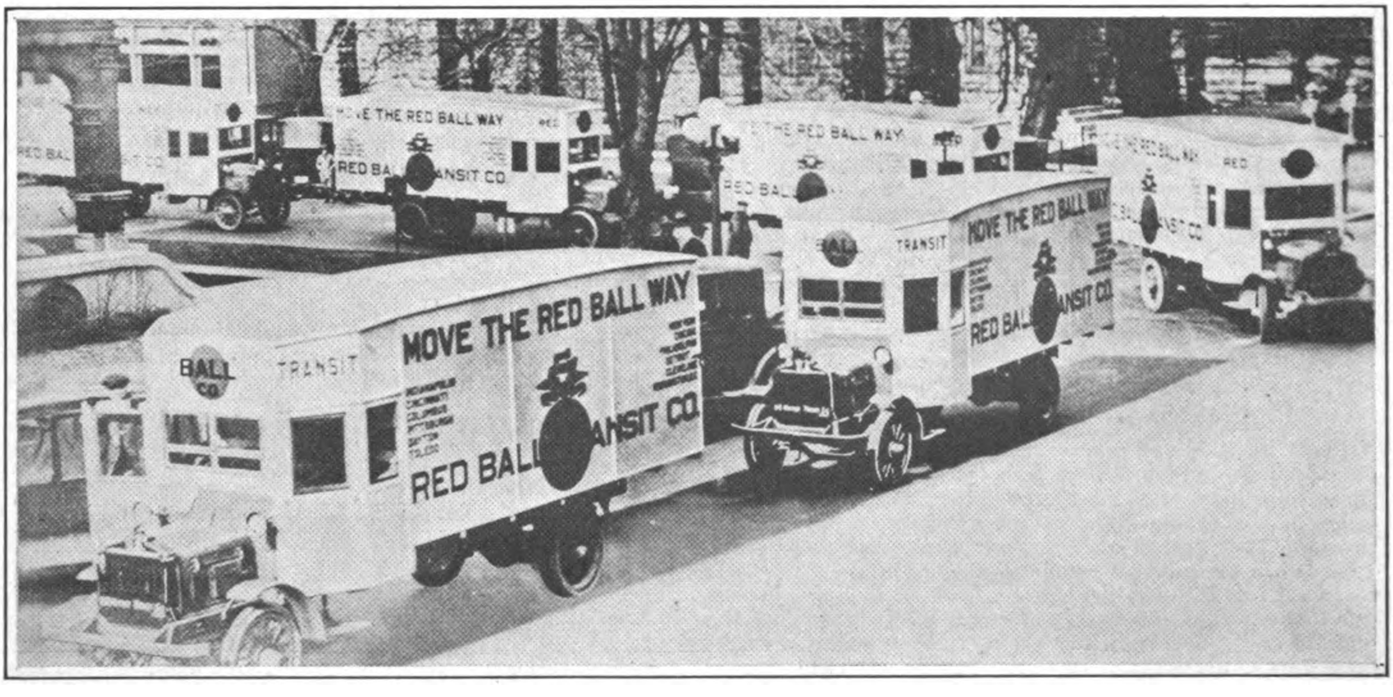
This company has successfully established a unique and economic system of motor transportation of household goods, which effects rapid deliveries requiring long hauls. In short, it has cut out the lost motion—that is the whole story.

With its various branches, it always is able to arrange return loads so that the trucks never run empty; hence rates are kept down to a very reasonable figure.

One of the principal advantages of the plan is that there is no packing or crating of household goods necessary before loading, consequently no uncrating and unpacking, after delivery. The goods are placed in the new home ready for use. Again there is no transfer at division points, where, with railroad shipments, so much delay and damage occurs.

When a moving contract is made with the company, a truck backs up to the door of the old home. The bric-a-brac and other furniture is removed; curtains and shades are taken down and all packed in these special, fully enclosed vans, where heavy blankets and pads prevent damage. The company guarantees safe delivery at destination, the household goods are insured, and all the owner has to do is to see that the truckmen can enter the new home after they arrive at destination. There, the goods are wiped and polished, then put in place ready for immediate use.

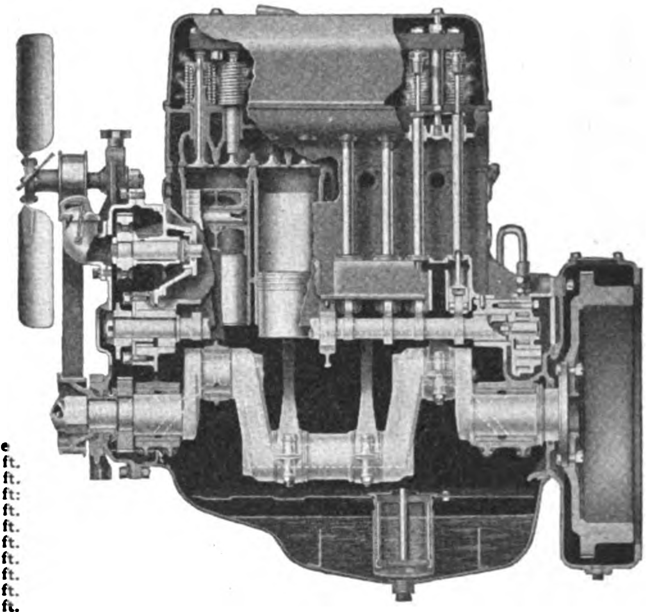
One of the Red Ball Co.'s notable household goods deliveries was by a convoy of eight trucks from Indianapolis to New York City. There was also one U. S. utility truck, loaded with supplies, accompanied by a convoy manager and an observer from the United States Motor Truck Co. The convoy went to Dayton at an average speed of 15 miles per hour; to Columbus at an average speed of 16½; to Wheeling the average was cut down to 8½ miles per hour, owing to hills and bad weather; to Pittsburgh the average was 11 miles. Then over the Allegheny Mountains, which were covered by snow and ice, to Gettysburg. On this section the thermometer registered 6 below zero. While these conditions prevented any speed tests, they did not hamper the steady movement of the fleet. From Gettysburg the route was via



A RED BALL TRANSIT CO. CONVOY OF UNITED STATES MOTOR TRUCKS (8 IN ALL) WHICH OBVIATED MANY RAILROAD BOTHERS IN CARRYING HOUSEHOLD GOODS FROM INDIANAPOLIS TO NEW YORK IN WINTER.

MIDWEST

COMMERCIAL CAR POWER PLANTS



MODEL 409
4 Cyl. 3¼ x 4½ inch

R. P. M.	H. P.	Torque
600	10	85 lbs. ft.
800	13.25	88 lbs. ft.
1000	16.80	90 lbs. ft:
1200	20.20	91 lbs. ft.
1400	23.80	90.5 lbs. ft.
1600	27.00	89 lbs. ft.
1800	29.60	87 lbs. ft.
2000	31.70	84 lbs. ft.
2200	33.30	81 lbs. ft.
2400	33.80	74 lbs. ft.
2600	33.00	65 lbs. ft.

Midwest Engines are Sold on the Basis of Performance

That's fair, isn't it?

We could advertise startling facts based on bore and stroke, thermal efficiencies, materials used, and many obscure points. Rather than that, however, *Midwest Engines* are advertised on the basis of *performance.*

They do their own speech-making. Subjected to rigid tests on the road and dynamometer, they have proved to commercial car manufacturers their performance-ability.

To What End?

To the end that many truck manufacturers desiring to deliver *Honest Service to the User* have adopted the *Midwest Engines.* The commercial car manufacturer who is interested in equipping his truck with an engine without peer in economy of operation, dependability and performance-ability will choose the *Midwest Engine.*

You owe it to the equipment you are marketing to specify, and see that you *get,* a *Midwest Engine.*

Sales Division 12

MIDWEST ENGINE COMPANY - Indianapolis, Indiana

DEPENDABLE POWER

FORGET BORE AND STROKE —— —— IT'S PERFORMANCE THAT COUNTS

Baltimore, Philadelphia, Newark, Jersey City to New York.

For educational purposes and publicity, the fleet of trucks paraded in cities and towns. More than 1000 miles were traveled, yet the total time lost for adjustments and repairs on all trucks was but 5 hours. Despite the fact that it was at the worst season of the year, with roads at their poorest, no accident to trucks, loads or operators occurred. Consumption of gasoline and oil was economical, when road conditions, time of year (February) and other difficulties are considered.

The return trip of the U. S. utility truck, from New York to Indianapolis, with full load, was made in 40 hours running time. Within 72 hours after it left New York it was in Indianapolis, with everything in good condition.

Most Oregon Trucks Driven Well

In a series of so-called surprise tests conducted in all parts of Oregon by operatives of the state motor vehicle department recently, it was found that 23 out of 122 trucks investigated were exceeding the speed limit.

The tests related to speed, lights, tire width, weight and commodity and as to whether the trucks were properly equipped with mirrors. In some instances the tests were made at night, in others during the peak hours of traffic in the day.

With relation to licensing it was found that 114 of the 122 trucks halted by the officers had proper registration and tags, while eight had filed applications. The condition of the lighting equipment was not all that could be desired.

Ninety-four of the trucks were being operated at or under the speed prescribed by law. It was found that nine were being operated at a speed forbidden, but not more than 3 miles an hour beyond the prescribed limit. Eight were being operated from 3 to 5 miles in excess of their allowance. Eight trucks were being operated more than 5 miles and under 10 beyond the limit.

On the other hand, it was found that 30 trucks were being operated from 1 to 3 miles under the law, 16 from 3 to 5 miles under and ten from 5 to 10 miles under the legal rate of speed. Seven arrests were made, two for overloading and five for exceeding the speed limit.

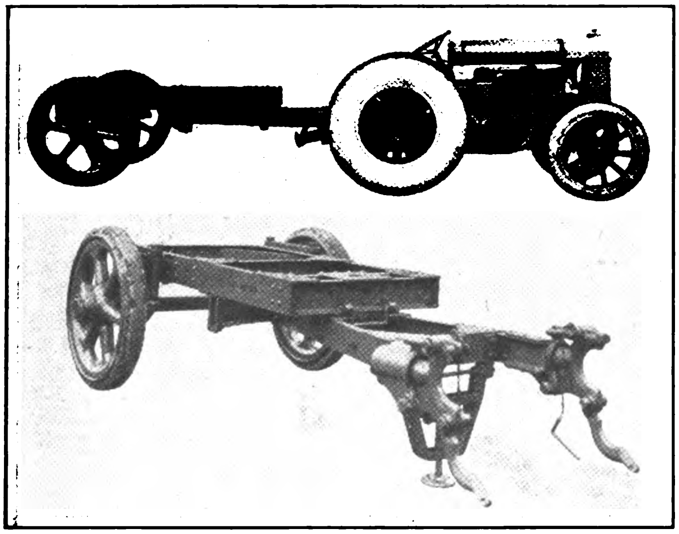
In March the activities of the state motor vehicle department field operatives resulted in the collection of fines aggregating $3398.50. The violations totaled 365.

Trailer and Spring Suspension Idea

Automotive Utilities Corp., 408 Detroit Savings Bank Building, Detroit, is manufacturing a two wheeled trailer which connects directly to the Fordson rear axle housing through an adaptor casting clamped solidly to groove in Fordson axle housing, immediately inside of wheel. The adaptor is a cast iron bushing designed so steel clamp encircling it may swivel rapidly on the adaptor, eliminating wear on axle housing, and throwing all wear on adaptor casting, which may be quickly and cheaply replaced. The steel clamps are flexible spring-cushioned connections between trailer and tractor, making them one unit. The channel iron construction under the trailer main frame is termed the "wishbone." On two ends of it are mounted the clamps. On its other end is mounted a 6 inch roller, carried on ¾ inch ball bearing, to carry the rear end of wishbone, which in turn carries 75 per cent of load through king plate and main frame of trailer.

Wishbone is constructed and connected to main frame of trailer to allow tractor to turn right or left without turning main frame of trailer until it comes to the point where tractor started to make its turn, producing a two-wheeled trailer of dead axle type which follows in the tracks of towing vehicle. The main frame is 3 feet wide, 7 feet long, and a 3 yard gravity end dump body, 3 yard gravity side dump body, 6x10 platform body, or hayrack can be mounted thereon. This frame is carried by an innovation in spring suspension, consisting of a cast steel head riveted on either side to main frame, which floats on three graduated coil springs on either side of frame, and designed for payload carrying capacity of 5 tons, of which 40 per cent is carried by the Fordson rear axle through wishbone.

This equipment—trailer and tractor—with pneumatic tires, including war tax—will cost under $1800, and is being manufactured by Automotive Utilities Corp., Detroit.



UPPER PICTURE SHOWS AUTOMOTIVE UTILITY CORP. TRAILER AFFIXED TO TRACTOR. BELOW TRAILER ALONE.

Trailer Helps Win a Weight Case

The first arrests of log truckmen, for hauling heavier loads than their licenses called for, resulted in failure to convict before a jury in the justice court in Shelton, Wash., April 14. The state patrol men tested the load of Ray Lofman with their loadometers and found a combined weight of about 43,000 pounds on a 7½-ton truck and trailer.

This was not denied, but defendant's attorney claimed that if the Scribner rule were applied, the weight would not be excessive, and also that if the weight shown were distributed over all six wheels, instead of the four weighed, it would not exceed the limit set by law for the tire width. This is the first time Washington state officers have failed to convict offenders on the showing of their testing machines.

Four States Issue Crossing Rules

Commercial motor stages, buses and trucks in Oregon and Arizona will be required hereafter to come to a complete stop before crossing railroad tracks, according to recent orders by Oregon's public service commission and by Arizona's corporation commission. The orders, similar to those issued by the California railroad commission and the Nevada public service commission will provide that motor vehicles subject to the orders shall come to a full stop not less than 50 feet from a railroad track or tracks at grade. Violation may subject owners of such vehicles to suspension or revocation of license.

During the year 1921, on the Southern Pacific lines in Oregon and Arizona, 153 motor vehicle accidents occurred at grade crossings, resulting in 5 deaths and 40 injuries.

Spokane's Motor Transport Growth

More than 100 trucks and stages will be used to handle freight and passenger traffic between Spokane and Inland Empire points this spring and summer, according to H. S. Hawley, manager of the Motor Bus Depot.

"Beginning May 1, there will be 11 stage lines, operating 70 passenger machines, going out from this depot, exclusive of many other lines that leave from other points. From the freight depot near the Phoenix mill, 20 or more freight machines will be run. Operators of stages already are planning for better service and for increasing equipment."

PRICES FIRMER

Business is now making its improvement felt everywhere. Prices in some quarters are now necessarily advancing towards levels in proper ratio to costs. The downward trend of prices has stopped. Liquidation has spent itself and productive volume is increasing.

Trucks can now be bought with full confidence.

Smith Wheels have stood the test of time, made in three types: Rigid, the Pneumatic and the Cushion. Every Smith Wheel has the full name SMITH appearing on it. It marks the highest quality in metal wheels. They are fast replacing wood and other metal types of wheels. The public now, more than ever before, demands quality represented in dependable service at legitimate costs.

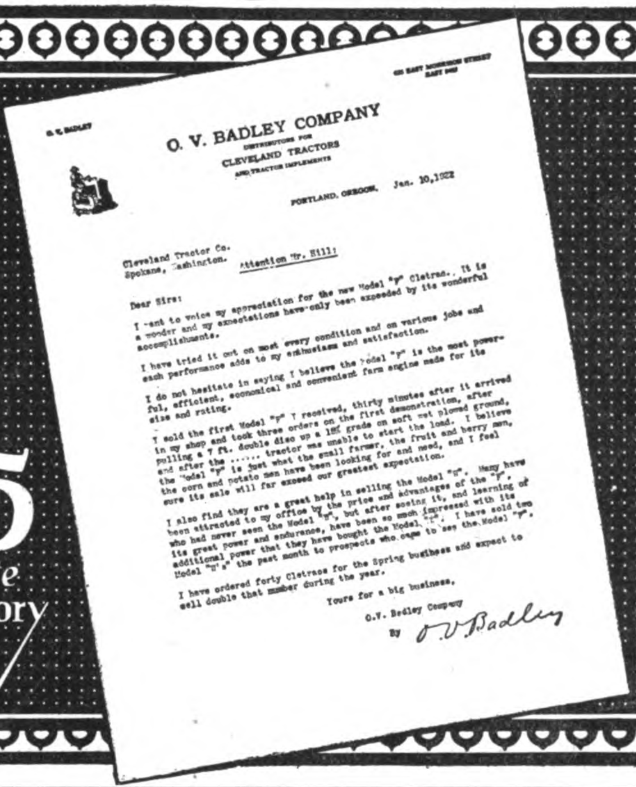
Smith Cushion Wheels solve the big truck problem. They preserve the truck, pavement and highways.

PACIFIC COAST REPRESENTATIVES

A. H. COATES CO., 770 Mission St., San Francisco, California

SMITH WHEEL
SYRACUSE N. Y. U. S. A.

The New Cletrac Model "F"



O. V. BADLEY

O. V. BADLEY COMPANY
DISTRIBUTORS FOR
CLEVELAND TRACTORS
AND TRACTOR IMPLEMENTS

PORTLAND, OREGON. Jan. 10,1922

Cleveland Tractor Co.
Spokane, Washington. Attention Mr. Hill:

Dear Sirs:

I want to voice my appreciation for the new Model "F" Cletrac. It is a wonder and my expectations have only been exceeded by its wonderful accomplishments.

I have tried it out on most every condition and on various jobs and each performance adds to my enthusiasm and satisfaction.

I do not hesitate in saying I believe the Model "F" is the most powerful, efficient, economical and convenient farm engine made for its size and rating.

I sold the first Model "F" I received, thirty minutes after it arrived in my shop and took three orders on the first demonstration, after pulling a 7 ft. double disc up a 18% grade on soft wet plowed ground, and after the ...... tractor was unable to start the load. I believe the Model "F" is just what the small farmer, the fruit and berry men, the corn and potato men have been looking for and need, and I feel sure its sale will far exceed our greatest expectation.

I also find they are a great help in selling the Model "F". Many have been attracted to my office by the price and advantages of the "F", who had never seen the Model "F", but after seeing it, and learning of its great power and endurance, have been so much impressed with its additional power that they have bought the Model "F". I have sold two Model "F's" the past month to prospects who came to see the Model "F".

I have ordered forty Cletracs for the Spring business and expect to sell double that number during the year.

Yours for a big business,

O.V. Badley Company
By O V Badley

$595 Complete F.O.B. Factory

"Just What They've Been Looking For"

THIS is one of the many hundred letters we have received from enthusiastic Cletrac dealers since that remarkable tractor innovation, the "Model F," was put into the field.

Note that this dealer emphasizes the F's adaptability to practically *every conceivable form of farming*—"just what the small farmer, the fruit and berry men, the corn and potato men have been looking for and need." It has meant fast sales for him, just as it has for all the Cletrac sales family. The new rock-bottom price gives the Cletrac dealer an appeal that reaches *every* farmer "where he lives."

A Cletrac sales connection in *your* territory is a rare money-making opportunity. Write today for information.

THE CLEVELAND TRACTOR CO.
Largest Producers of Tank-Type Tractors in the World
19127 Euclid Avenue Cleveland, Ohio

LOS ANGELES 1029 S. Grand Ave.
SAN FRANCISCO 147 New Montgomery St.
SPOKANE 30 E. Sprague Ave.

Valuable Transport Book Issued

A thorough covering of the motor truck market today, a guide to the fields of most promising prospects for 1922, and a salesman's manual based on conditions that now confront the industry, all are included in a comprehensive volume just completed by Transport Truck Co., Mount Pleasant, Mich. It is a work of unusual importance at this time, as it deals particularly with the situation since the beginning of the period of readjustment.

An extensive dragnet of research was thrown out months ago. To its resources of connections throughout the states, the company added every channel through which reliable information on conditions and outlook could be obtained. Never before, it is stated, have so many agencies collaborated on a work devoted strictly to motor truck information. In fields where up-to-the-minute statistics were not available, original research has been made, producing first hand information.

The net result is optimistic. Ample proof is found that the motor truck industry is on a gradual upward curve, the benefits of which will begin to be felt generally before the story of 1922 is completed.

As the book is intended only for distribution among Transport field men and territorial agencies, it particularizes on the Transport's 1922 line of six models and equipment. Here, too, remarkable work has been done by the Transport engineering, production and sales forces. From the Rapid Transport 1 ton delivery to the heavy 5 ton service, specialized construction, capacity and equipment for every form of transportation is thoroughly described and illustrated. Truck salesmen are armed with an answer to every question that can arise.

The Transport text book marks the aggressive activity that will rapidly advance motor transportation to the general adaption needed to put all business on the most efficient and most economical basis of service. Transport Truck Co. is well fitted to produce such a work by the success which has marked its operation from the beginning. Its factory never has been shut down for one working day. Not one distributor ever has left the organization to take up another line.

"Everything points to a marked increase in business this year," says President M. A. Holmes.

Largest Moving Van in Spokane

The largest furniture moving van in Spokane has made its appearance. The body is 17 feet long, 3 feet more than the usual length, according to M. O. Anderson, manager of the truck department of the Eldridge-Buick Co., who made the sale. It is 6 feet 8 inches wide and 7 feet high, sufficient to convey the furniture of a house containing 7 to 8 rooms, including the piano. Within the body is a winch, for lifting heavy things. The body is mounted on a GMC truck chassis of 3½ ton size. The lengthening was done in Spokane.

A truck of this size and with equipment of this kind means considerable saving for the customer, as it makes unnecessary the use of two trucks, usually required for a moving job.

Railroad Mileage Decreasing

Records compiled by Interstate Commerce Commission indicate more miles of railroad are being abandoned than built. In the year ending October 31, 1921, the commission authorized 405 miles of new railroad and the abandonment of 702 miles.

1,430,000,000 Tons a Year by Truck

The Senate committee on reconstruction and production estimates the national annual motor truck mileage at 7,150,000,000, and that 1,430,000,000 tons of freight are transported annually over highways by motor trucks.

Fools rush in where experts fear to drive.

Tractor Department

Facts Affecting Tractor Interests

THE whole country has had a late spring. In the East too much rain has made growing things more susceptible to insects. There have been some cold snaps, and Central and Northern California apricots were hit in April; other fruits and vegetables, not so hard. As to the hard frost experienced in most citrus sections of the southern half of the state, in January, analysis shows that while growers' net returns on the 1921 crop (year ends August 31, 1922) may be 26 per cent less than in 1920 (year ended August 31, 1921), purchasing power of those returns will be only 20 per cent less than in 1920, making the practical actual decrease in prosperity—in buying power—only 6 per cent; and the dollar's buying power grows daily. The fruit growers' official figures show net returns on oranges and lemons alone, for the year ending August 31, 1921, totaled $78,405,275. Even a sum 6 per cent less than that will buy quite a number of tractors and other things. Gross value of California's fruit crops in 1921 was $181,488,000; of field crops, $162,202,000.

Sales of farm implements in the Middle West exceed a year ago 50 per cent—result of better farm product prices. As about 32,000,000 people live on farms, the increase in sales means much to tractor makers and merchants, directly and indirectly. The farmer has been nearly down and out. After 18 months of tragedy—less tragic in the Pacific region than elsewhere—he and his family are cheering up.

Standard Oil Co. says tractors in use in California increased 26 per cent—from 17,380 to 21,922—in 17 months, between August 1, 1920 and January 1, 1922; that there is one tractor for every 6.7 farms in the state. Most counties showed increases; those in which small tractors predominate, the most. In some counties the number nearly doubled—Ventura County, from 392 to 615. Los Angeles County led, increasing 232, having a total of 1920 on January 1, 1922. Fresno County, second, increased 644 to 1654; Tulare County, third, increased 251, to 1651; Orange County, fourth, had a total of 1400; Imperial, fifth, 802.

The improving situation is being noted not only by bankers but also, naturally and with some glee, by merchants. Grain prices dropped a bit from February, chiefly due to breaking of the drought in the Southwest and improved winter wheat outlook, and because Argentina and Australia are exporting freely; but the price trend is upward again.

This country always has surplus agricultural products. That means export conditions are important. In 1921, exports of 32 leading farm products gained 27 per cent in volume, though their value decreased 39 per cent; but so did the value of manufactured products; and the fact about the "collapse" of our exports is, it refers not to quantity, but to prices and decreased buying power of farmers' dollars—notably in respect to high freight rates. Leading farm product exports so far this year have totaled about $300 per annum for each of the 6,500,000 farms, compared with $290 averaged since 1912, and with $166 in the pre-war normal year, 1913. Wheat exports are an index to the whole outlook. While in a recent period of 7 months wheat exports were 11 per cent less than in the same period in 1920-21, vast new markets for grain are developing. Other nations are not producing as we are. National City Bank of New York recently said Europe, except Russia, would be producing nearly at normal in 1922. Not quite, says Prof. A. E. Taylor of Leland Stanford University. He surveyed Europe in 1920-21 for the American Relief Administration. Some crops, he says, will be about normal in 1922, but farm animal products will not, one reason being that humans now eat 85 to 90 per cent of the 100 per cent of each grain, instead of milling wheat to 72 per cent and rye to 76 per cent, as before the war.

Speaking of our production, and prices: With only 8 per cent reduction in production of ten crops (about 95 per cent of the total acreage) since 1919, the 1921 value was 55 per cent less than that of 1919, according to the Department of Agriculture. The 1921 value was $12,366,000,000; that of 1920 was $18,263,000,000—little more than half that of 1919, which was $23,783,000,000. In quantity, 1919 was about the same as in the preceding 7 years; 1920 was record; 1921 was lowest since 1913. Reverting to prices: The total gross value of crops and animal products reported by the census for 1909 was $8,558,000,000. Taking that as an index, and calling it 100, the aggregate value increased to 115.1 in 1913, the year before the world war began; remained practically at that in 1914; was 125.5 in 1915; 156.6 in 1916; 225.9 in 1917 (we entered the war that spring); 262.7 in 1918; 277.9 in 1919 (the year after the armistice); 190 in 1920; 144.5 in 1921. If the 1919 value, the apex, be called 100 as an index, present conditions are made plainer. It shows 1920 at 68.4 and 1921 becomes 52, or little more than half the 1919 value. In 1921 more than half the total value was in four crops—corn, 18.5 per cent; hay and forage, 16.6; cotton seed and lint, 10.7; wheat, 10.5; total value of the four, $3,960,000,000 or 56.3 per cent of the value of all crops.

California Co-operative Crop Reporting Service says the state's farm labor supply is about 102 per cent normal, with demand 96 per cent of normal. Nationally, supply is 99.5, demand 89 per cent of normal. Farm workers, like others, respond to the lure of the Pacific region. In 1920 California's supply was 81 per cent of demand; the national supply only 68.8 per cent. At present, supply is easier back East. Near Neenah, Wis., farmers are hiring men at $26 to $40 a month, compared with $50 to $75 a year ago.

California's annual Farm Bureau conference, comprising about 150 persons—three directors from each of the 40 counties having farm bureaus, plus one or more representatives from the agricultural extension service in each county—will be held May 3 to 11, inclusive. On May 3 the conference will meet at the College of Agriculture, in Berkeley. Sunday and Monday, May 7-8, will be spent in Los Angeles County; May 9 in Riverside and San Bernardino Counties. Adjournment will be in San Diego May 11. About 60 automobiles will carry the delegates from city to city.

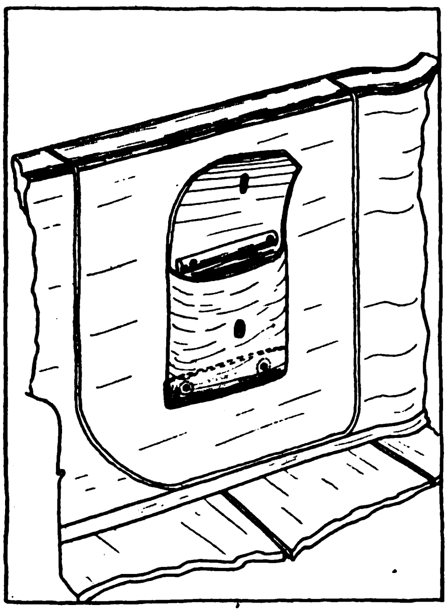
Samson Tractor Co., dealer in General Motors farm implements, has taken a long lease on the 3 story building at 119-123 North Los Angeles St., Los Angeles, where it will handle tractors, trucks, harrows and plows and a full line of parts. For two years the company has been on Figueroa St. between 27th and 28th, and it is still owner of the entire block there.

Motorists' Letter-Box

RUBBER LAMP CONTAINERS.

Editor Motor West: I have much difficulty in carrying spare lamps in my car without breakage, and sometimes am left in the dark on the road, when a lamp goes out and I find my spare lamp broken or damaged so that it will not burn. I am not as orderly as I should be, and do not always prevent tool equipment from jarring against the pasteboard cartons in which I receive the lamps. Please suggest a simple and safe carrier for these breakable articles.—G. N. P., Bellingham, Wash.

There should be little difficulty in storing breakable articles about the car in some small wooden or metal box. It is true, however, that the vibration and jar of the car is almost as hard on the filament of spare lamps as on those installed in the sockets. The sketch shows a rubber pocket which can be made up in a few minutes and installed on any convenient out of the way surface of the car, and which will protect lamps, etc.



SPARE-LAMP POCKET MADE OF RUBBER.

The pocket shown is a section cut from an old tire tube, the top being partially cut away to form a flap. A piece of round moulding is advisable for holding the pocket at the top as shown, but before it is secured in place the bottom should be turned back under and secured with tacks or screws, passed through a piece of pasteboard, to act as washers. While usually unnecessary, it may be found desirable at times to install a fastener to hold down the flap.

Editor Motor West: My 1914 Ford rattles when I reverse and when I press brake lever to stop, although the brake bands were relined about six weeks ago. What do you think is the trouble?—Sacramento, Calif.

The rattle undoubtedly is caused by lost motion in the rear end. Advise you to have this thoroughly overhauled, if you can not do it yourself.

ADJUSTING BREAKER POINTS.

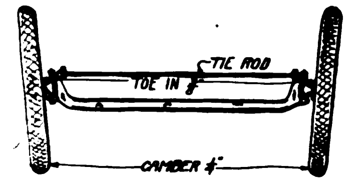
Editor Motor West: I am running an electric service station and have no trouble except with the adjusting of breaker points. I would like to know the exact distance the breaker should open on battery type ignition, low tension dual systems and high tension magnetos.—A. L. V., Seattle, Wash.

To get the exact distance a breaker should open you will have to get a breaker wrench for that make of ignition. You will find a small blade of thickness gauge on the side of this wrench which is the exact thickness that the points should break when wide open. The points on all battery type ignition systems should break from 18/1000ths to 20/1000ths of an inch. On low tension dual systems, about the same distance. On high tension magnetos they should break about 16/1000ths of an inch. They should be set as nearly exact as possible. The points on a high tension magneto should always be platinum, as substitutes are bound to give considerable trouble.

ADJUSTING FRONT WHEELS.

Editor Motor West: I have a Ford and my front tires wear very rapidly. It seems very peculiar, as they wear right in the center of the tread, just a streak running all around the casing. I have tried several makes of tires and have decided they are not at fault. This is very expensive and I am spending my hard earned cash for tires which only last a short time. The car also steers very hard. C. E. T., Portland.

The cause of your tire trouble is easily located and the repair is simple, but it must be done accurately. Your front wheels are out of true, so that your tires are being dragged to a certain extent and the road is acting as a grinder on the center of the tread. In lining your wheels you must see that they have the right toe-in. This means they are closer at the front than at the rear, as you will notice in the illustration. To measure this toe-in, take an extension rule 6 feet long. Place steering gear so that wheels are straight forward. Then measure distance between the wheels at the rear. Next measure the distance at the front. The measurement should be ⅛-inch less at the front than at the rear. If this toe-in is too much or too little your tires will receive a drag on the road and cause excessive wear. The toe-in is adjusted with the tie rod between the steering arms. The top part of the axle should tilt back slightly to give proper cambre (convexity). If the axle stands vertical the radius rod is sprung and it will be necessary to straighten it or replace it with a new one.



ADJUSTMENT OF FRONT WHEELS.

CARBURETOR LEAKS.

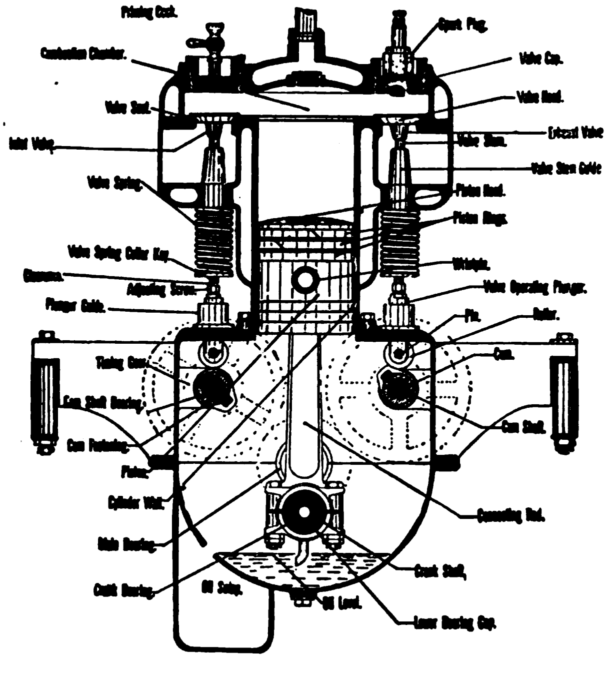
Editor Motor West: I have a carburetor which leaks continually when the engine is not running. What would cause it to do this? It will let a quart of gas leak out in a very short time and I have to shut off my engine every time I stop.—N. L. M., Palo Alto, Calif.

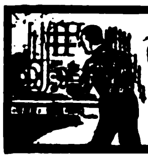
There are just two things which would cause your carburetor to leak—the float valve and the float. If float valve does not seat you can grind it by using pumice stone and oil mixed to form a paste. Grind the float with this compound the same as you would grind a valve. If the float is heavy or full of gas it should be replaced with a new one, as this is cheaper than treating the old one.

Seemingly O. K. today, punk tomorrow, happens so often in the matter of brakes that it is mentioned here.

Lots of blowouts come from pinched tubes. Be careful.

The cross section illustration of an automobile may assist readers who do not know the proper names of parts and are handicapped in ordering by mail. In the illustration merely a general idea is given. The manufacturers often use different names for similar parts, and owners not located near garages are advised to get their manufacturer's standard book. The illustration is copyrighted by H. D. Lloyd.



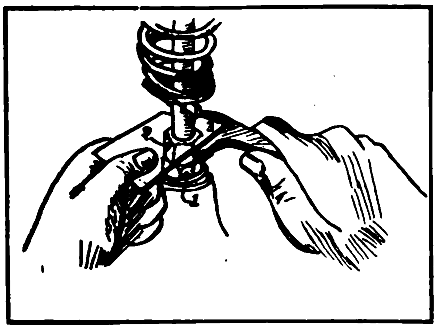


Shop Practice Hints

VALVE CLEARANCE.

On account of continuous wear and the necessary grinding of valve at frequent intervals, it is necessary to adjust the valve clearance, the gap between valve lifter and valve stem. This gap is used to insure the valve seating properly. But for this gap the valve would be held out of the stem when the engine is hot, because metals expand under heat pressure.

To adjust the gap it is necessary first to see that the valve is seated and the lifter is down at the lowest point, or that it is against the heel of the cam. The valve and lifter can be placed in this position by turning the crank until the valve opens and just closes. Then give the crankshaft half a turn. This will let the lifter down to the lowest point and against the heel of the cam. Next release lock nut No. 1, as shown in illustration. Then by adjusting nut No. 2, bring the gap between the adjusting nut and the end of the valve stem to not less than 3/1000ths inch or not more than 10/1000ths inch, of the exact distance the maker recommends. This should be done while the engine is hot. Measure the clearance with a thickness gauge as shown at No. 3. When the gap is just right tighten the lock nut, No. 1. Place the next valve in position and adjust the gap and proceed with each valve separately in the same manner until all are adjusted.



ADJUSTING VALVE CLEARANCE.

BULB REPLACER.

It is possible to make a very satisfactory bulb replacer for electric lights by fastening four stiff wires on the end of a broom handle, so that they form a sort of hand which slips over the bulb without injuring it. There should be enough spring in the wire to enable the operator to turn the bulb in either direction in the socket. This is a handy way of replacing bulbs in out-of-the-way places.

HOW TO OIL A CAR.

The oil in all parts of any piece of machinery will wear out in time. A very serious mistake is made by merely adding more oil and not changing the old, worn-out oil. Equipment for changing oil should consist of the necessary oil measures, grease gun and oil can, and plenty of waste or rags to wipe all parts clean after oiling.

The engine requires a good grade of cylinder oil of the proper quantity, which can be determined by the oil gauge. The old oil should first be drained out and the crankcase filled with the same quantity of kerosene, to which add a pint of cylinder oil. Start engine and run it a minute or so to wash all parts, then drain kerosene and fill to the proper level with new oil. This should be done every 2000 miles.

The transmission should be cleaned and washed with kerosene every 3000 or 4000 miles and then filled with transmission grease of the proper consistency, or with steam cylinder oil. It is a very good idea to add a little graphite to the oil.

Universal joints should be packed with hard grease every 1000 or 1500 miles. This can be put in with a grease gun.

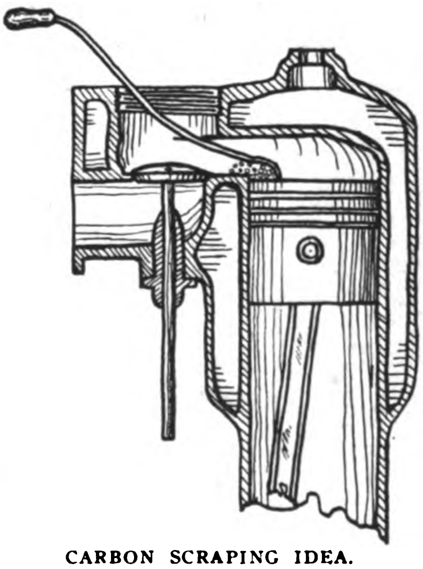
Wheels should be removed and packed with hard grease every 2000 or 3000 miles. Some wheels are equipped with grease plugs through which the grease may be forced with a grease gun, making it unnecessary to remove the wheel. Refill all cups as soon as they are screwed down, using a good grade of hard grease or graphite grease.

Differentials should be treated and oiled the same as the transmission and with the same oil. If a differential is noisy and the noise cannot be taken out by adjusting the mesh of the ring gear and pinion, it can be filled with fiber grease. Some use ground cork, but this is not good policy. The fiber grease will give the proper lubrication and eliminate the noise also.

All parts that require hand oiling or use of oil can should be oiled with a good grade of machine or light cylinder oil. After oiling, each part should be wiped with a rag before going to the next. When you finish the job all parts will be clean. Always remember the oil is needed on the inside—not on the outside.

REMOVING CARBON.

Carbon in cylinders is caused by imperfect combustion of the fuel and oil. On the piston heads, as well as other parts, carbon in time becomes so thick that it will be raised to incandescence and cause premature ignition. In most engines the piston head may be scraped clean, by means of specially formed scrapers as illustrated, introduced through an opening over the valves or through the spark plug hole, in cases where the cylinder head is not removable. The form and size of the scraper will depend on the particular engine, but almost any suitable form may be made from ¼ or 5/16 steel tubing about 12 inches long, with ends hammered flat and bent horseshoe shape in a vise. The ends are then filed straight and sharp and the shank bent suitably so that by turning the crank to bring the piston into accessible position, it will be possible to detach all the carbon deposit. Kerosene is used to soften the carbon and a small battery lamp, connected to a length of cord, aided by a flat dentist's mirror, allows the whole interior of the combustion chamber to be explored with ease. The deposit is scraped out clean with the piston at the highest point. Frequently two scrapers will be needed in order to use both right and left hand bends. The advantage of tubing for these tools is that no forging is necessary.

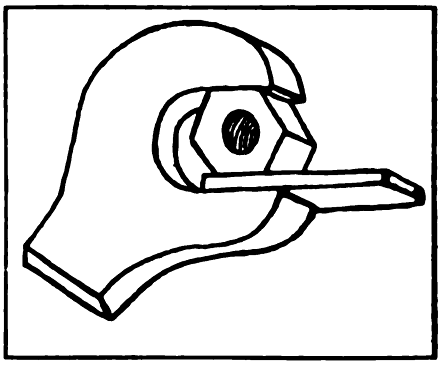


CARBON SCRAPING IDEA.

BIG WRENCH, SMALL NUT.

In emergency, if a wrench of proper size cannot be obtained, a large wrench can be used by inserting the bit of a screw driver, or any other square, flat piece of metal between the jaws of the wrench and the nut.

Never use a wrench that is just a trifle larger than the nut, as it will slip and wear off corners, making it hard to remove the nut with any size wrench thereafter. It is much better, when necessary, to use a wrench large enough to allow a piece of metal to be inserted in the jaws, as shown.



MAKING BIG WRENCH FIT SMALL NUT.

CLEANING LAMP REFLECTORS.

The reflectors in any head lamp will tarnish and turn black in time, and if not cleaned will begin to rust soon. They can be cleaned properly by lampblack, rubbed on by hand until all tarnish is removed. Then empty the lampblack. Any that remains in the reflector can be blown out. Never rub a reflector with a cloth or attempt to wash it, as it will be scratched badly.

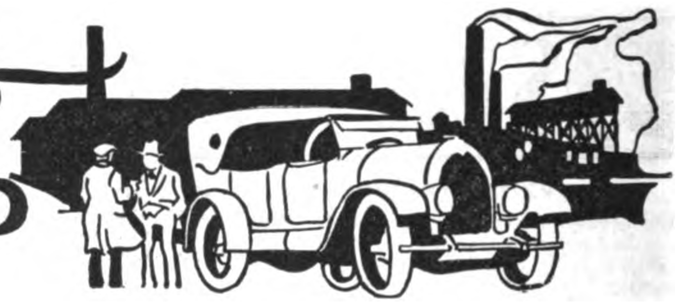
FAN BELT SLIPPING.

If a fan belt slips the engine will run hot. The belt should be repaired immediately. If the belt is in good condition it can be tightened and then treated with any good grade of belt dressing. Honey and rosin, mixed into a thick paste, make a very good dressing. It can be applied with a stiff brush or with a rag, on the inside of the belt.

NEED SPECIAL ATTENTION.

If the engine is in good condition, inspect steering gear and drag links. Then inspect brakes, which should always be in proper adjustment. Regular inspection of brakes and steering gear is very important. Safety First.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"

(F. Ed Spooner)

There is a new spirit among manufacturers and dealers. This is difficult of definition. It is a feeling. However, March was the best month since August, 1920. Not long ago there was a sentiment that things would not right themselves this year, that that elusive "corner" had yet to be rounded. Today little is heard of it, and when it is mentioned those who do so smile and pass over the subject. The "corner" for a long time was a sore point. Financial men and others prated about business having rounded the corner, and then it grew worse and then worse.

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Sometimes it is not best to make assertions. In fact, it has long been the case that predictions made as real assertions went wrong invariably. Those who held that the improvement would be gradual and that the corner would be rounded unconsciously and without blare of trumpet, were more nearly right than others who contended that the improvement would come as suddenly as had the bad times started.

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As a matter of fact, confidence returned only gradually. Buyers had the feeling that prices would come down and would not buy. That period has passed for it is realized now that prices are at their lowest. Efforts to create a stampede for higher prices, on the basis that buyers would not purchase on a falling market, failed to a large extent. A few raised, but it was the stabilized market that was wanted and that was necessary, and the market now is stabilized.

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The improvement has come not alone to the car makers but to the makers of trucks, tractors, parts and accessories. Passenger car production for the first quarter ran far ahead of the same quarter last year, and truck production gained even more in similar comparison, which was to be expected, as building operations now are heavy. Also fleet owners have used up their surplus trucks to some degree and are forced into the market.

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In one week Detroit added 3300 men to its payrolls. When factories add men by thousands in the "automobile center of the universe" it is evidence beyond doubt of improvement. It is even good to know that factories are finding an actual shortage of skilled automobile labor for that is a sign of improvement.

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Pessimists still are in evidence. They say: "What of the future?" and predict a sudden letting off in demand within a short time. They are probably right to a degree, but they may prove all wrong this time. Optimists feel that about the time the present buying districts have been supplied, there will come renewed business from the farming districts, where crops will be coming in during the summer. Production costs in these districts having gone down and prices being fair, profits will be taken by the farmers, who will turn buyers again. Replacements must be made, and farmers long have been out of the market and are users of cars through very necessity.

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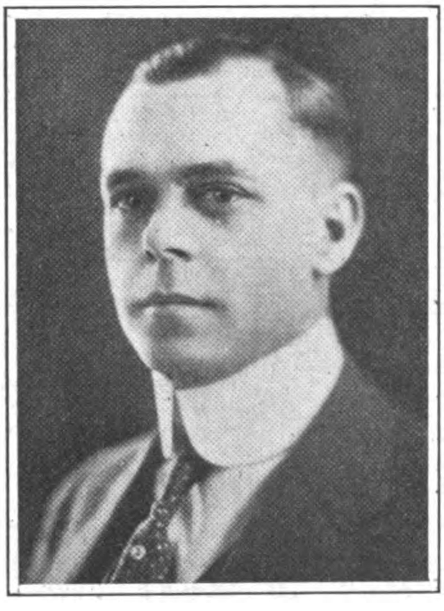
Now that stabilization is believed to be a fact, and present price lists on the leading makes of motor cars may be considered permanent, it is felt increase in buying will be steady and the expansion more noticeable as the months go by. Public confidence in values will be restored. The frequent price reductions of the past, each heralded as the ultimate sacrifice, quite naturally took away confidence of buyers. In the opinion of Detroit leaders, and leaders of other cities in which automobile manufacture centers, prices are becoming as nearly stabilized as they ever will be.



GEORGE HARRISON PHELPS

Mr. Phelps, director of advertising for Dodge Brothers during eight years, and who will continue to direct the advertising policies of that concern, henceforth will conduct a general advertising service under the name of George Harrison Phelps, Inc., Detroit. A commodious building at 110 Rowena St. is being remodeled for his exclusive use. With him, in handling several national accounts, will be some of the recognized leaders in the profession. Mr. Phelps began his experience in the first garage in Worcester, Mass., as a boy, just out of college. Later he bought the garage. For some time he was in business for himself in Boston and New York. His merchandising ability therefore is well rounded.

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The question regarding what really is, or was, normal production, has again arisen. The suggestion has been made that production figures for all years since 1914 be forgotten completely—all since that year having been abnormal—and that 1914 figure be called normal. Harry C. Stutz says that America, in the years following 1914, was forced to supply the world, a condition which existed throughout the period of the war. That situation will not again develop, and therefore its figures hardly are to be considered as at all probable for any time in the future. It is believed that 1921, when 1,700,000 cars were manufactured, will not be exceeded in the future, in spite of the lack of buying power by farmers in 1921.

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How many will make the old car do for another record? Upon the answer waits the day when the real shortage of new automobiles will be felt. The number of manufacturers who have been able to turn out cars for storage, with an idea of taking care of spring demand, can be counted on the fingers of one hand. Production is under strict curtailment right now. Manufacturers have no expectation of producing beyond actual orders. They are taking chances, and the bankers would not support them in taking chances.

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Purchasers of cars today are getting the best of it in quality as well as price. It is common opinion that, before very long, prices generally must rise, as losses are still a matter of record on cars made to a price, and such losses will not be maintained.

* * *

Better Times Are Here, However.

For the six months ended February 28, Packard Motor Car Co. is said to have had a net loss of $774,546.

* * *

Officials of Continental Motors Corp. in Muskegon, Mich., say production on the motor for the Star car will be on the basis of 200 motors daily.

CLEVELAND SIX

A New Type of Fine Car

The new Cleveland Six is far too fine and too individual a car to be classified by its low price. It is a distinctly new type of six—a pioneer in modish style and beauty at modest cost.

Style features such as the nickeled radiator and wind-shield, the smart aluminum steps and individual fenders, the new type of headlamps, the clear-vision top, confer distinction far above the Cleveland Six price.

The 45 h.p. motor, built in Cleveland's own shops, is a prodigy of power with such quick pick-up, such smoothness as you rarely meet with.

It's a delightfully comfortable car to ride in—low hung on long, soft-actioned underslung rear springs.

And an easy car to handle because of its short turning radius, its sure, quick-acting brakes, its moderate weight and its six cylinder flexibility.

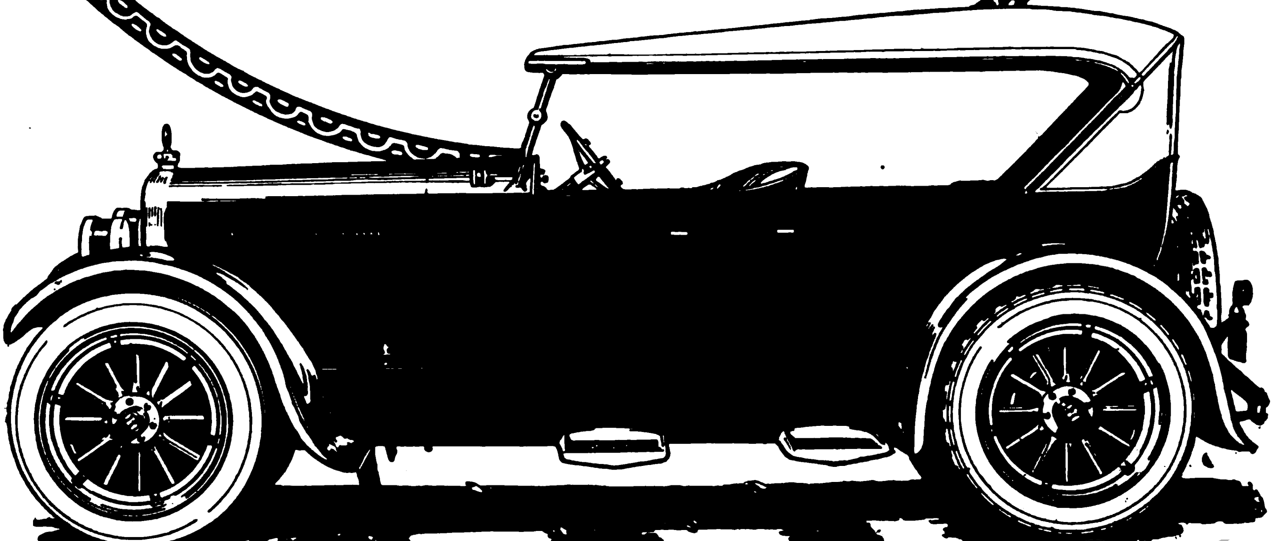
The Cleveland is not merely another light six. It is a distinct and intermediate type of car possessing all the beauty, style, comfort and dignity of a larger six, with the operating economy of much smaller cars.

$1195

Sedan—$1595 **Coupe—$1550** **Roadster—$1175**

(All prices f.o.b. Cleveland)

CLEVELAND AUTOMOBILE COMPANY, CLEVELAND
Export Dept., 1819 Broadway, New York City
Cable Address "CLEVEAUTO"



Dickinson Cord Tire Corp. Officers.

Officers of Dickinson Cord Tire Corp., 220 West 19th St., New York City, have been announced as follows: F. S. Dickinson, president; Louis C. Block, Philadelphia, E. W. McCarty, New York, C. H. O'Connor, New York, and N. R. Bagley, New York, directors. Mr. McCarty is secretary and Mr. O'Connor treasurer.

The president, F. S. Dickinson, became identified with the pneumatic tire industry at its inception, having introduced the original pneumatic tire in the United States. Through continual service in the pneumatic tire field and through able assistance in bringing forth many valuable inventions of the day, universally used in the automobile field today, Mr. Dickinson acquired the knowledge necessary to the development of the methods of manufacturing cord tires for which the corporation is responsible.

Louis C. Block, of Philadelphia, is one of the men held responsible for much of the success of Ford Motor Co., for which he was Philadelphia branch manager many years. He now is a distributor for Gray Motor Co., and is president of Philadelphia Automobile Trade Association.

E. W. McCarty is active head of the J. C. McCarty Co., one of the oldest and best known houses in the hardware trade.

C. H. O'Connor is well known and highly respected in real estate and insurance circles, and N. R. Bagley is president of the N. R. Bagley Co. and well known as a manufacturer, importer and exporter and banker.

The officers of Dickinson Corp. have invested more than $400,000 of their own money in developing the cord tire machine and in perfecting the inventions. The company holds all priority rights to patents and these have been adjudicated in the court of last resort. These patent allowances number more than a score. So revolutionary is the cord tire machine that national attention has been drawn to it and tire manufacturers from every part of the world have viewed it and studied its operation with intense interest.

* * *

Earl Motors Stockholders Meet.

At the recent stockholders' meeting of Earl Motors, Inc., at Jackson, Mich., the following were elected to the board of directors: Rumsey W. Scott, vice president of Chemical National Bank, New York City; John O'Leary, vice president of Chicago Title & Trust Co.; J. E. Farrell, vice president and treasurer Sinclair Refining Co., New York City; William Sparks, president Sparks-Withington Co., Jackson; George S. Scobie, secretary Hayes Wheel Co., Jackson; Frank Joyce, vice president American Auto Trim Co., Detroit; Clarence A. Earl, president, and Leon S. Wescoat, treasurer of Earl Motors. The new board then elected the following officers: Clarence A. Earl, president and general manager; Walter Merry, vice president; George S. Scobie, vice president and comptroller; L. S. Wescoat, treasurer.

* * *

Nash Sales Increase 50 Per Cent.

Sales of Nash cars for the first quarter of the year increased more than 50 per cent, compared with the same period of 1921. The company's 4 and 6 cylinder car factories are oversold. There were on hand for April delivery orders for 5025 cars, including sixes and fours, as against 3307 orders for the same month last year. As to the fours, there were almost twice as many orders for April as could be produced in the plant. The factory ran in March to its full capacity, yet carried over into April something like 400 or 500 unfilled orders. Every indication was that the 4 cylinder car factory would carry over into May over 1000 unfilled orders.

HARRY A. GRUBB.

Mr. Grubb, after 12 years of wide experience in tire sales management has become assistant general manager in charge of sales for Victor Rubber Co., Springfield, O. His tire merchandising experience is being applied to Victor's selling plans and already has resulted in the formulation of an aggressive selling program, calling for the increased distribution of Victor tires and tubes through the better class of established tire distributors and merchants.

There also were many unfilled orders for April at the 6 cylinder plant, where every effort is being made to meet the heavy demand.

* * *

Not for New Hudson Site.

Roy D. Chapin, president of Hudson Motor Car Co., has stated positively that the purchase of 1000 acres of land east of Pontiac, Mich., where it is expected a great industrial center soon will be established, was a private enterprise, and not made with the intention of moving the Hudson plant there from Detroit. Mr. Chapin said: "It is a fact that Howard E. Coffin and I own almost 1000 acres of land on the east side of Pontiac which, because of favorable conditions out there undoubtedly will become a great industrial development."

Charles Schweinert Eases Up.

A. Schrader's Son, Inc., of Brooklyn, New York, announced on April 3 that M. Charles Schweinert, who for 35 years has been associated with it in various capacities, such a general manager, treasurer, director, and president, has resigned his official position with the company. Mr. Schweinert has, however, because of his wide knowledge of the corporation's business and his engineering and mechanical skill, been retained by the corporation in an advisory capacity.

As Mr. Schweinert's duties in such capacity will occupy only a portion of his time, he contemplates devoting the remainder of it to other engineering and mechanical matters and to looking after his private interests.

Only recently Mr. Schweinert's many friends were delighted because, after three months of illness, he had returned to the helm.

Henry P. Kraft, vice president and treasurer, who has been associated with the Schrader company for the past 39 years, succeeds Mr. Schweinert as president.

This company has been in business since 1844, and in addition to the manufacture of diving apparatus of all kinds, is one of the largest manufacturers of automobile accessories. Everybody knows Schrader tire valves.

* * *

Markle's New Company.

Lafayette Markle, much of whose connection with the automotive trade has been in distributing capacities in Chicago, has returned to that field and city, and established the L. Markle Company, to act as distributor for the Rickenbacker car. Mr. Markle formerly handled the Oldsmobile, Buick and Studebaker lines in Chicago. More recently he has been general manager of the Oneida Truck Co.

* * *

Island Life Awhile.

Frank G. Carrie, for several years identified with the distribution of Marmon cars in New York City, has been obliged to retire as vice president of the New York Marmon company, to spend the remainder of the year in rebuilding his health. He plans to spend the next few months on an island which he owns, in Long Island Sound.

* * *

Dort Output Increases.

Production of Dort Motor Car Co. at Flint is showing steady gains as the season progresses, according to an analysis of sales by J. D. Dort, president. January tripled the output of the same month in 1921, and February more than doubled January. Orders for March deliveries exceeded February by more than 200 per cent.

* * *

To Start Plant Immediately.

International Rubber Co. of America, incorporated in Delaware, whose bid of $200,000 for the Anderson, Ind., plant of the former Quality Tire & Rubber Co., has been accepted, is preparing to operate the factory immediately.

HOLDEN AIR SHOCK ABSORBERS

FOR ALL MAKES OF CARS

This Advertisement Is To You MR. DISTRIBUTOR and you MR. DEALER Do You Want a Winner?

RIDE ON AIR

To Success with Holdens

Of course you know that the air principle of shock absorption is the scientifically correct and really only satisfactory one. But when you think AIR shock absorbers you think Pierce Arrow or Packard or Cadillac, don't you?

Why not think Ford or Dodge or Buick?

You can with Holdens in mind, for here are AIR shock absorbers that do what shock absorbers are supposed to do and sold at a price that fits a Ford pocket-book as well as a Pierce Arrow or anything between.

Think that over a bit. How many Ford or Dodge owners do you know who would install AIR shock absorbers if the price were right? It spells Q-U-A-N-T-I-T-Y sales. Quantity sales on liberal terms mean money in the bank. And that is what you want, isn't it?

Your territory may be open. Let's get together.

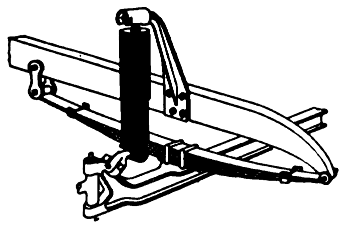
HOLDEN.

N. B.—We are planning an extensive national advertising campaign.

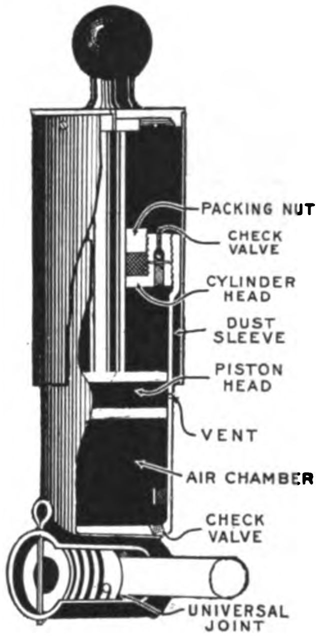
NO

OIL
SPRINGS
ADJUSTMENTS

INSURES SAFETY



Front Installation

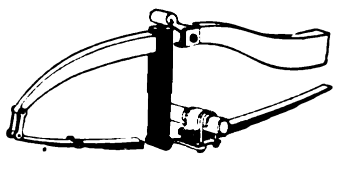


The method of installation positively eliminates all side sway and preserves the center of gravity.

NO

RATTLE
UPKEEP
MUTILATION OF CAR

PROMOTES COMFORT



Rear Installation

Holden AIR shock absorbers use air to absorb both the impact and rebound shock. They will carry overload regardless of spring capacity. They have less than one-half the parts used in any other AIR shock absorber, are absolutely fool and trouble proof and will outlast the life of the car.

HOLDEN SHOCK ABSORBER CO. LTD.
3105 SAN PABLO AVE. OAKLAND, CALIFORNIA.

Leahy Heads Durant Sales.

M. B. Leahy has been appointed general sales manager of passenger cars for all the Durant companies. He will be in charge of sales for the Long Island City, Lansing and Toronto plants. Mr. Leahy's first important position in the automotive industry was as New York branch manager for the Chevrolet Motor Co. He was promoted steadily until he became assistant general sales manager of Chevrolet under W. C. Sills. When Durant Motor Co. of New York was formed, W. C. Durant engaged him as sales manager of that company, and his promotion to general sales manager has followed.

* * *

Dodge Brothers Stock Control.

Dodge Brothers is capitalized at $10,000,000, of $100 par stock. The widows of John F. and Horace E. Dodge each own 49,995 shares, the remaining 10 being divided among four company executives. The company is now turning out more than 500 cars daily, has no bank debts and has balances of many millions It is stated that when Horace Dodge received a bid for the plant, before his death, he said it would be possible for him at any time to go away for years and never have a worry. The story that Dodge Brothers might be bought is absolutely denied now.

* * *

Hayes Wheel Extra Profit Edition.

The April issue of Hayes Wheel, published by Hayes Wheel Co., Jackson, Mich., is an "extra profit edition." The ideas in it, as to window display, interior arrangement, where to seek customers, are go-getters for dealers generally.

For dealers handling "the first successful automotive wire wheel ever manufactured and offered for sale," the situation is described by President C. B. Hayes as a "self-starting coverage with a 12 cylinder opportunity."

* * *

Simms Magneto Office in Detroit.

On May 1, Simms Magneto Co. opens a branch office and show room at 5781 Woodward Ave., Detroit, to exhibit its product, consisting of magnetos, battery ignition, starting and lighting systems and Homelite, the portable lighting and power system.

L. F. Acker has been appointed manager, and it is intended to cover the states of Ohio and Michigan from the Detroit office.

* * *

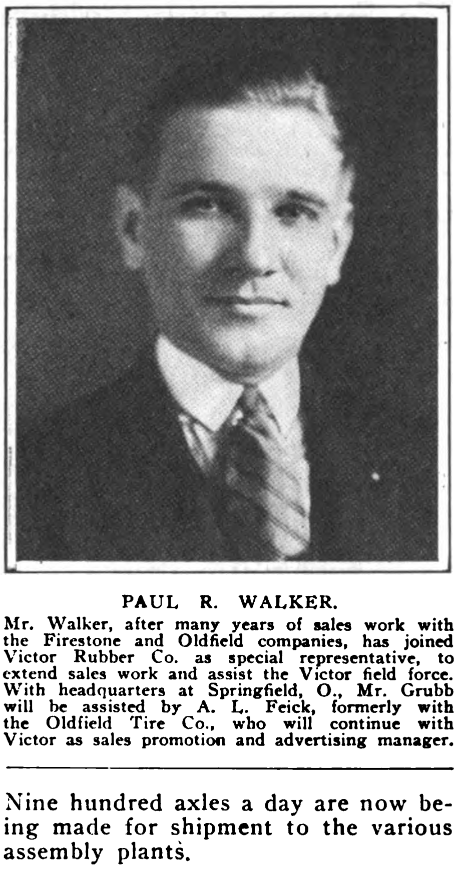
Link Belt Sues G. M. C.

Link Belt Co. has filed a suit against General Motors Corp. in the United States court at Wilmington, Del., for an amount "upward of $3000." A subpoena has been issued, returnable June 7. While papers do not show, it is understood to be an action alleging breach of contract, and the actual amount involved is said to be upwards of $1,000,000.

* * *

Night Shift for Chevrolet.

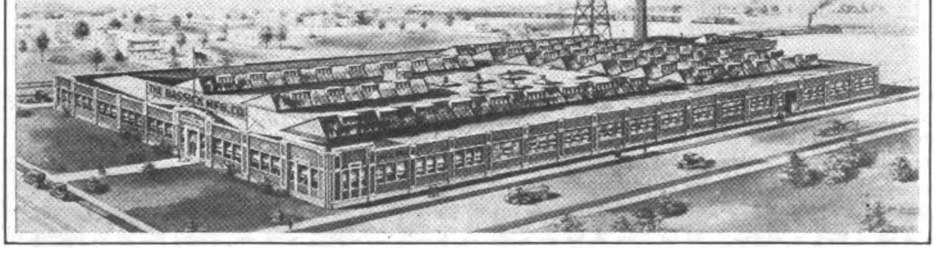
The Chevrolet Motor Co., of Flint, Mich., started a night shift recently, for the first time in several months.



PAUL R. WALKER.

Mr. Walker, after many years of sales work with the Firestone and Oldfield companies, has joined Victor Rubber Co. as special representative, to extend sales work and assist the Victor field force. With headquarters at Springfield, O., Mr. Grubb will be assisted by A. L. Feick, formerly with the Oldfield Tire Co., who will continue with Victor as sales promotion and advertising manager.

Nine hundred axles a day are now being made for shipment to the various assembly plants.



BASSICK MFG. CO.'S NEW PLANT IN CHICAGO, DETAILS ABOUT WHICH APPEARED IN MOTOR WEST ISSUE OF APRIL 15.

Saxon to Ypsilanti.

Saxon Motor Car Corp. has decided to remove its plant to Ypsilanti, Mich., where it has leased quarters in an automobile factory already established. The Saxon Co. has asked its creditors for more time. It believes that if this relief is granted it will be able to extricate itself from its present difficulties. The plan proposed will not be put into operation unless 80 per cent of the creditors consent.

* * *

J. J. Cole Back from Abroad.

J. J. Cole, president of Cole Motor Car Co., Indianapolis, has returned from a sojourn of several months in Europe. He says American cars are seen everywhere abroad, but that in France it is next to impossible to sell them, due to the high duty and the reluctance of French mechanics to give service on foreign makes.

* * *

Abroad for Hupp.

Charles S. Turner and Roger N. Lagow have been appointed foreign factory representatives by Hupp Motor Car Corp., Detroit. Mr. Turner will cover territory ranging from Mesopotamia to Siberia, and will make his headquarters at Calcutta, India. Mr. Lagow's field will be in South and Central America and West Indies.

* * *

Falor Doing Big Tube Business.

When the Falor brothers, after having grown up with the Goodyear Co., formed Falor Mfg. Co., they did a good stroke. This newest of Akron's rubber companies makes only inner tubes. In the week ending April 15 it announced its output doubled, a night shift put on, and the need of a larger plant imminent.

* * *

Bleiweiss, Templar Sales Head.

Paul E. Ryan has resigned as sales manager of Templar Motors Co., Cleveland. Maurice Bleiweiss, four years with the company, as service manager, advertising manager and assistant sales manager, takes his place.

* * *

Pyrene Headquarters Moved.

Domestic activities of Pyrene Mfg. Co., hitherto of New York City, hereafter will be conducted from the new plant at Newark, N. J. General offices will be at 520 Belmont Avenue, Newark.

* * *

Waterhouse Quits Muncie Wheel.

C. N. Waterhouse, secretary and sales manager of Muncie Wheel Co., Muncie, Ind., is about to retire from that business and expects to make his home in Oklahoma City after May 1.

* * *

G. M. C. Insurance Subsidiary.

General Exchange Corp., subsidiary of General Motors, has been organized to carry fire and theft, liability, property damage and collision insurance for owners of automobiles.

You'll Feel at Home at The Botsford

When Motor West selected this comfortable, home like, and fire-proof hotel as San Diego headquarters for all who read and travel, the three chief demands of the well-read traveler were considered.

LOCATION - SERVICE ATMOSPHERE

Manager Floyd B. Kirk takes especial pride in the central location of his house—just north of Broadway on 6th street—the courtesy extended to guests by all employes, the up-to-the-minute accommodations he has to offer, and the cozy lure of hominess that pervades his entire establishment.

Before you start, be sure of Special Rates and Reservations by wiring—

HOTEL BOTSFORD
SAN DIEGO, CAL.

Durant Invests in Seiberling.

Frank A. Seiberling, president of Seiberling Rubber Co., announced recently that W. C. Durant headed a syndicate of 15 men who each subscribed for $50,000 of Seiberling stock on the basis of 40 per cent preferred and 60 per cent common. This completes present Seiberling financing. The initial stock was $2,000,000.

Seiberling publicity, received separately from the foregoing and not referring to it directly, says:

"Perhaps there is no better indication that business is on the way back to normal, than is given by the announcement of Frank A. Seiberling, president and general manager, that $750,000 of the unsold portion of the stock of the $10,000,000 Seiberling Rubber Co. has been sold, thus completing the present financing of the new company. With the money raised by the sale of this stock, the company is going ahead rapidly in increasing production, to take care of a demand even greater than had been anticipated."

* * *

Maxwell Factory Convention.

A 3 day convention of Maxwell-Chalmers sales supervisors, representing every district in the country, opened at the Maxwell factory in Detroit, April 11. The addresses, each incisive on its subject, were of wide range. Among others, A. T. Stanton, director of service, talked on service policy and merchandising trucks. W. J. Mattimore, director of advertising, spoke on that topic. The convention ended with a Detroit Athletic Club dinner and a theater party.

* * *

No Congress for Couzens.

Mayor Couzens of Detroit, former Ford high executive, denies he is to resign as mayor and try to be elected U. S. senator.

AC

The Standard Spark Plug of the World

Every motorist is a prospect for the sale of AC Spark Plugs because most cars are factory-equipped with AC's and there are specially designed AC's for all other engines, too.

A C Spark Plug Company
FLINT, *Michigan*

Dill Joins Essenkay.

George W. Dill was associated for eight years with the sale of the Dayton Airless tire, having begun in March, 1914, as stenographer in the sales department of Dayton Rubber Mfg. Co. He served in different capacities in that department until 1917, when he enlisted in the army. He was in France 16 months, serving as principal clerk in charge of the precedent and research branch of the office of the chief quartermaster, A. E. F.; returned from overseas in September, 1919, and was made head of the Airless Tire mail sales division; was appointed sales manager for Dayton Airless Tire Co. in October, 1920, and—

That position he resigned recently to accept appointment as director of sales for Essenkay Products Co., Chicago.

Mr. Dill is a pioneer of the non-pneumatic or tire cushion field, and his long training and diversified experience in the sale of the Dayton Airless tire places him in position to make an enviable showing in marketing the new Essenkay product, known as the Ammonia Gas Tube.

* * *

Receiver for Halladay Motors.

A receiver has been appointed for Halladay Motors Corp., Newark, N. J., capitalized at $400,000. The proceedings were instituted by the Barber Asphalt Paving Co., of Pennsylvania. The Halladay Co. admitted its obligations and joined in the petition for a receiver.

LOS ANGELES WAREHOUSE COMPANY

MAKES A SPECIALTY OF AUTOMOBILE STORAGE

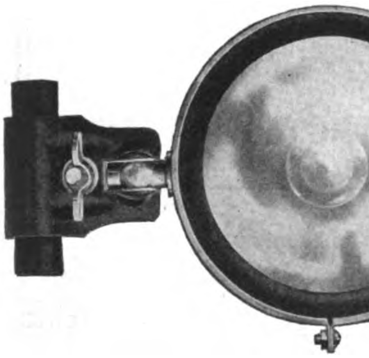
CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
14727, Main 4787

New Things in the Accessories Field

ROFFY SPOTLIGHT.

The Roffy spotlight is a high powered driving light with mirror glass reflector of return ray type that minimizes glare, and will not rust, tarnish or deteriorate, according to the manufacturer, Standard Corp., Columbus, O. The reflector is practically the same as the expensive, laboriously ground and polished type found in powerful searchlights, but the Roffy product is "blown," in all sizes from 3 to 18 inches diameter, for spotlights, locomotive headlights, flood lights, etc. It is silvered and made moisture proof by gutta percha paint. Another feature is the ball and socket universal joint for the bracket, permitting the spotlight being easily and quickly aimed in any direction. Price $5.



ROFFY SPOTLIGHT.

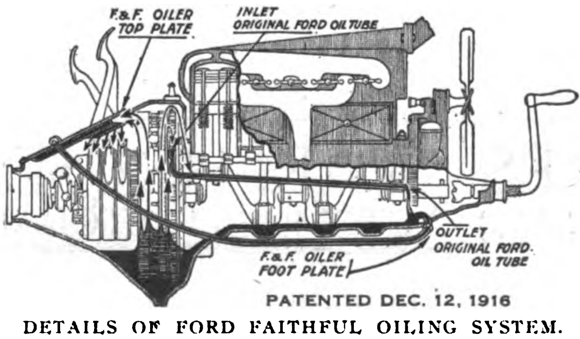
OAKES SPARE TIRE LOCK.

The Oakes spare tire lock consists of two simple parts—a barrel-shaped malleable iron casting, and a pick-proof circular lock, which fits into outer end of casting. Its is finished handsomely with black enameled housing and nickeled lock face, making it rust-proof and durable. There are two keys and almost unlimited key changes. Manufactured by Oakes Co., 3100 Roosevelt Ave., Indianapolis.

OILS FORD FAITHFULLY.

The Ford Faithful oiling system, manufactured by W. O. Thompson Mfg. Co., Pasadena, Calif., assures a constant flow of oil, and particularly when the car is on a steep grade, or when the motor is doing heavy duty.

Using this system, the Ford transmission cover is replaced by a Ford Faithful cover containing a reservoir. Just above the base of this reservoir an outlet connects with a pipe, that runs to the front of the motor and with a small casting is fastened under the front end of the motor. The result is that the flywheel picks up the oil and deposits it in the top of the reservoir, where it flows by gravity down through the pipe into the front of the motor. The outlet from the reservoir being above the reservoir's base allows sediment, brake lining, etc., to be deposited in this little pocket, from where it is easily removed. The Ford Faithful oiling system is covered fully by patents, and already has general distribution throughout the Pacific Coast states.



DETAILS OF FORD FAITHFUL OILING SYSTEM.

AVOID $5 FINE.

A dealer who is alive both to his own and his customers' interests had a car owner stop at his store to replace a burnt-out head light. There was difficulty in supplying the bulb required, and the car owner knew that if he tried to go on with one light it was almost sure to mean a fine. The dealer had been selling a lot of See More trouble lamps, and suggested that the car owner buy one and hang it on the front near the "dead" lamp, running the cord to the dash light. The customer was greatly pleased, as it solved his immediate problem, and gave him a most useful emergency lamp to look for engine trouble at night, or to change tires by.

The dealer or clerk who is alert to make a timely suggestion can put many a dollar in the cash register that would not otherwise find its way there.

PULLS, LIFTS CARS EASILY.

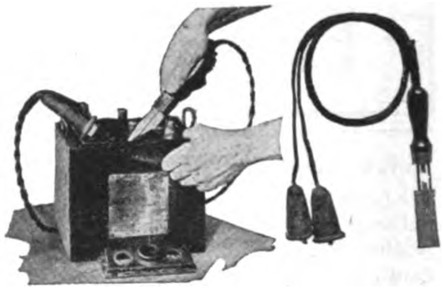
C. F. Smith Mfg. Co., DeKalb, Ill., is manufacturer of the Smith Lift-Out car puller, a neat device to be carried in the car for developing tremendous power in pulling the car out of bemired roads onto firm ground. It weighs 7 pounds, and in connection with block and tackle will pull a car through hub-deep mud, the manufacturer states. It is self-locking, can be attached to a stake driven in the ground, or to telephone post or fence post, and is furnished with 8 feet of pulling chain and 4 feet of anchor chain with hooks. In the same way it can be used also as a garage hoist for lifting cars of any weights, for working underneath. No. 1 retails at $10; No. 2 at $20. A heavy No. 2 model, for large cars and trucks, weighs 25 pounds, and sells at $20.

RELINERS AND BOOTS.

Always save your old casings as they can be used for reliners and boots. The bead can be cut off and then it is very easy to cut two or three layers of fabric and pull them out. By relining an old casing with this fabric you will be able to get a much extra milage out of it, in most cases.

HYRATE ELECTRIC KNIFE.

Service Station Supply Co., 30-32 East Larned St., Detroit, is manufacturing the Hyrate electric knife for removing sealing compound from storage batteries. This is an electrically heated tool, with patented hot blade. It carries heat to the spot needed, and stays hot without reheating, and diminishes the possibility of firing compound, or burning case or jar. It consists of a blade, handle, wire, and connections. Insulated clips connect to poles of a 6 volt battery, and knife is ready for instant use. Heating element is made of special patented alloy, and when heated will not corrode or oxidize. Price $13.50.



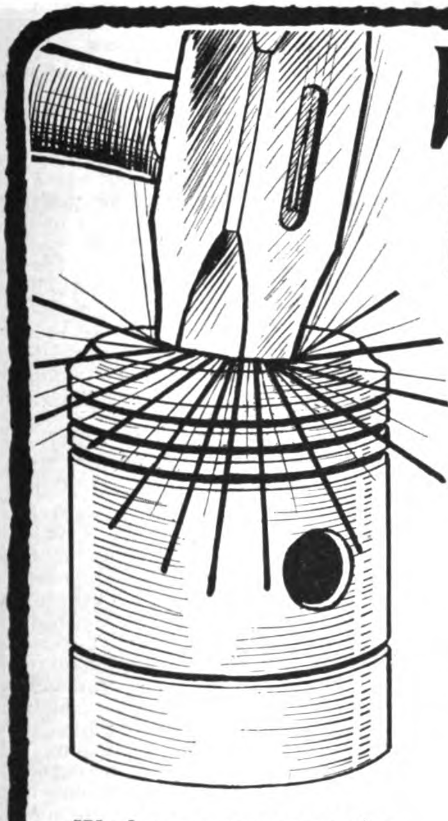
HYRATE ELECTRIC HOT KNIFE.

THE STRICKLER GUN.

The Strickler high pressure grease and oil gun develops from 10,000 to 15,000 pounds pressure or more in cleaning out old grease, rust, corrosion, or gummed bearings, for properly lubricating heavy trucks, tractors, farm and road machinery, especially where bolt holes and grease cups are on load side of bearings. The gun is a hexagon steel barrel, chambered internally and threaded for a heat-treated steel plunger provided with an air chamber which keeps live pressure on gun after lever ceases being turned. Gun is 1 inch in diameter, 4 inches long, and weighs 1 pound. Price with nozzle $3.50. Extra, other-size nozzles, 80 cents. Adkins, Young & Allen Co., 561 Washington Blvd., Chicago, manufacturers, also make a complete high pressure grease gun garage outfit, consisting of a gun and 17 nozzles, selling at $18.

MOLYBDENUM STEEL BUMPERS.

Cox Brass Mfg. Co., Albany, N. Y., has placed on the market the Cox molybdenum steel bumper in various weights and models with attachments designed to fit each one of the various makes of motor cars. So far as known at this time, the company claims it is the only one making use if this particular steel in the production of automobile bumpers. It beleves itself also to be the oldest bumper maker, having developed bumpers from iron bars to heat-treated loop-spring designs.



When FORCE *meets* STRENGTH

Pistons are subjected to hundreds of violent explosions every minute a motor is running. The force of each blast is terrific—enough to wreck the motor if valves and pistons fail to move and relieve the pressure.

Pistons that will meet this constant stress month after month, must first of all be strong—but they must also be light enough to operate easily and without waste of power.

Jahns Pistons Combine Strength With Light Weight

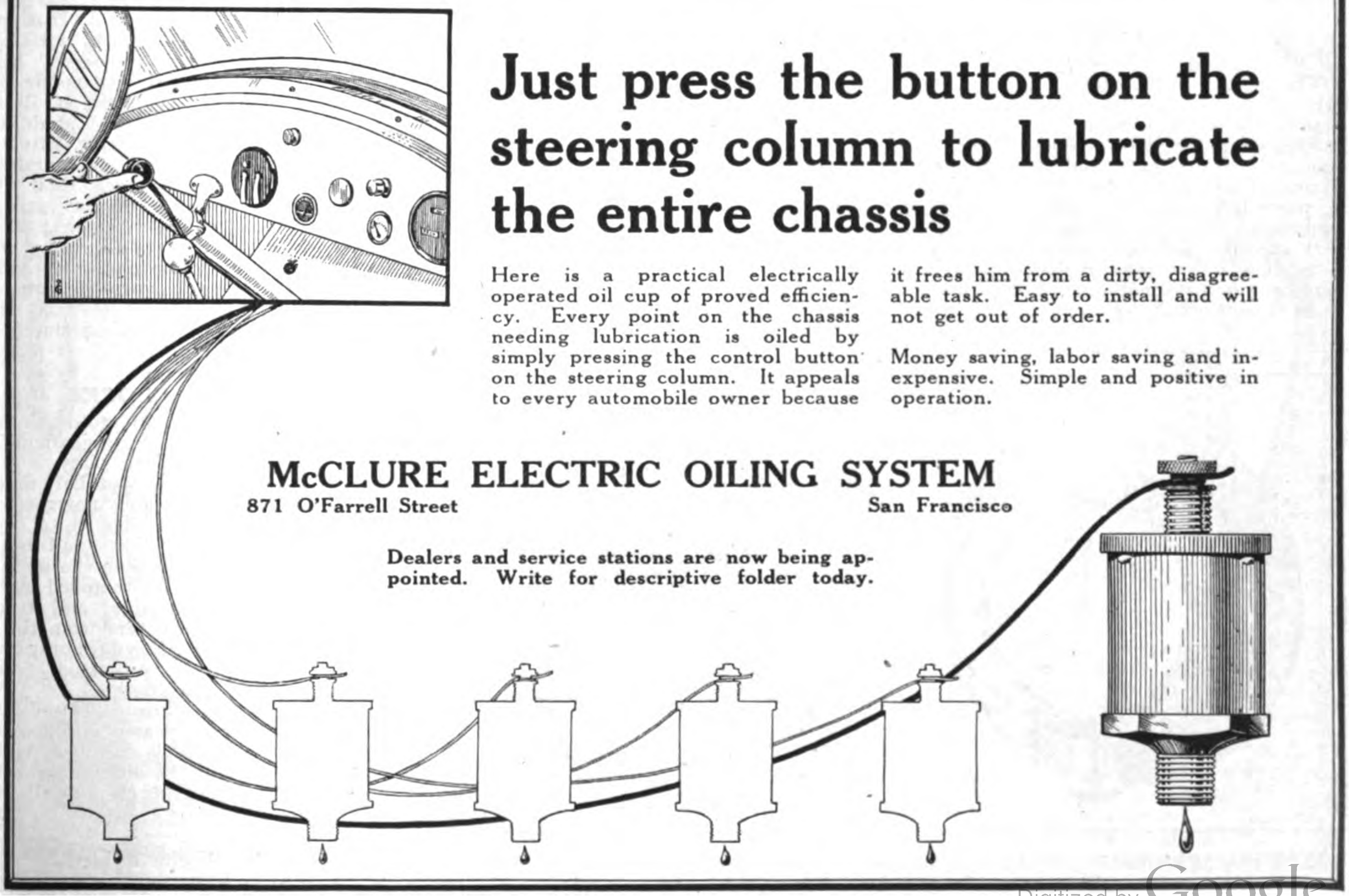
Jahns pistons do not sacrifice strength for light weight. They are made as strong as they need be and as light as safety permits. That's why they have become recognized by motorists, mechanics and engineers as the greatest of all replacement pistons.

No freak designs. No innovations. No experimental compositions. A quality product, honestly built and backed by unstinted service from a factory that makes "Nothing But Pistons" for every known size and kind of motor.

We have a representative near you. Let us put you in touch with him.

W. H. JAHNS

2652-2664 Lacy Street
Los Angeles, Calif.



Just press the button on the steering column to lubricate the entire chassis

Here is a practical electrically operated oil cup of proved efficiency. Every point on the chassis needing lubrication is oiled by simply pressing the control button on the steering column. It appeals to every automobile owner because it frees him from a dirty, disagreeable task. Easy to install and will not get out of order.

Money saving, labor saving and inexpensive. Simple and positive in operation.

McCLURE ELECTRIC OILING SYSTEM

871 O'Farrell Street
San Francisco

Dealers and service stations are now being appointed. Write for descriptive folder today.

A. E. A. CATALOG.

It must weigh 8 or 10 pounds. It made Motor West's mail scale, capacity 4 pounds, "hit the ceiling."

Referring to the Automotive Equipment Association catalog "A." It is an olive-green buckram-covered tome nearly 2 inches thick. It contains nearly 7000 pages, 9 x 12, of fine, heavy enameled paper. On its fly leaf one is told it is a collected, condensed and standardized catalog of automotive equipment. Its two indexes enable one to locate immediately the page or pages devoted to any product made by members, or to the product's manufacturer. Illustrated descriptions of products are in groups—body equipment, chassis equipment, electrical equipment, garage equipment, sundries, tire supplies and tools. Each group in the book is indicated by cut-in markers.

A truly remarkable book, received from William Von Elm, chairman of the association's catalog committee, 461 Eighth Ave., New York, who writes: "May we request your co-operation to the extent of bringing the merits of our book to the attention of those who can use it to advantage?"

The introductory, by William M. Webster, commissioner in charge at the executive offices, City Hall Square Building, Chicago, tells briefly that the association, founded in Chicago in July, 1915, with 14 charter members, now has more than 500 "and ranks with the leading representative and progressive organizations in this industry. Its membership is composed of the most successful manufacturers and jobbers engaged in the business, co-operating at all times to bring about ideal conditions, constructive work and helpful co-operation between its members, throughout the United States and Canada. With such a capable body of men gathered together in an association, and with such a vast collection of experience and ability to draw from, it is not hard to determine the reasons for the wonderful achievements of this association."

The general information page tells that the catalog is intended to bring about a better understanding as to the methods of cataloging products of members for ready reference by the trade, and to place at its command intelligent, descriptive material, properly illustrated, for catalog purposes, compiled in a clear, concise manner. Jobbers desiring full page electros of portions of pages, for use in their own catalogs or other printed matter, can obtain them if authorized by the manufacturers whose pages are desired. Reprint sheets also can be obtained for jobbers' catalogs, upon similar authority from manufacturers. All copy, electros, etc., are compiled to meet requirements of the standardized jobber catalog, that is, paper page 7½x 10⅝, type page 6x9.

The book contains not only descriptions and illustrations, but list prices, subject to change without notice.

USES OF SAFETY GLASS.

Automobile accessories made of safety glass, that tough, almost unbreakable material that is attracting so much attention at present, are becoming more numerous, and some cars, notably the Reo, are using it on all visors on closed cars. Mr. Evoldsen, of the Safety Accessories Co., at San Pedro, Calif., predicts that within five years all makes of cars will be using it. He is kept very busy fitting cars with windshields, windows, wind wings or deflectors, and visors. The latter are made in a green safety glass, to lie flat on the windshield, to save the driver's eyes as he looks through. These accessories are made in all styles and patterns. . The center panels of tonneau shields are sometimes made of the safety glass, and the others of plate, so that if the outside panels should strike the center, they would not break.

SAFETY GLASS DEFLECTOR.

This glass will stand a heavy blow with a hammer, without breaking or splintering off, though, of course, it will be cracked.

Besides automobile accessories, the glass is being used in a number of other ways. Oil companies use it in the peek holes of the oil stills. If the glass in these holes should break the gases would escape, and fire hazards would be much greater. Owners of motor boats and yachts also have begun using this glass in windows, and for windshields in speed boats. It is especially useful in speed boats as it protects the driver. The terrific speed of these little racers brings great pressure to bear on the shields, and the force of the waves is likely to cause ordinary glass to break. Some of the handsome new yachts are being equipped with safety glass.

ROBERT BOSCH LINE.

The complete line of Robert Bosch magnetos and spark plugs is described in a recent booklet issued by Robert Bosch Magneto Co., Inc., 123 West 64th St., New York City, Otto Heins president. There are 12 types of magnetos, ranging in weight from 2¼ to 22 pounds, and covering the entire internal combustion field from small single cylinder stationary engines of ½ horsepower to giant motor truck, marine and aviation engines. Every type is completely enclosed, dust and waterproof, but easily accessible for inspection. Robert Bosch spark plugs have crescent shaped electrodes, increasing the electrical discharge and cutting down electrical resistance. The insulating material is an artificial stone, "steatite," said to be practically unbreakable and unaffected by heat. The plugs can be taken apart for cleaning, and are sold at $1.25 each.

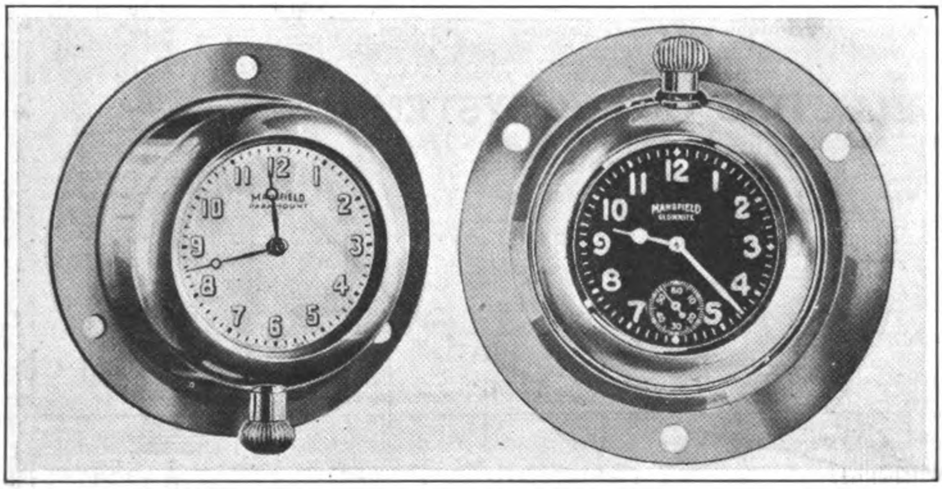
REPAIRMAN'S HELPER.

U. P. C. Book Co., 243 West 39th St., New York City, has issued The Automobile Repairman's Helper, in two volumes, by S. T. Williams and J. Howard Pile. Considering the frequent intricacy of automotive repairing processes this work may be considered a wonderfully successful attempt at simplification. Illustrations and plain line charts and drawings abound. The authors have, in very compact form, given first the best method of doing a particular job, and then the proper order of sequence of the various operations. Jobs are described in 1, 2, 3 order. Volume 1 is devoted to shop work in general, special tools, particular jobs on passenger cars, and on trucks; volume 2 to shop work, electrical testing, tire repairing, and repairs on axles, clutches, etc.

MANSFIELD CLOCKS.

Glownite and Paramount motor clocks are manufactured by J. F. Mansfield, 9 Maiden Lane, New York City. The Glownite clock is a radium-dial timepiece; of nickel silver, it does not rust or tarnish. It may be attached in a few minutes by three small bolts and nuts, without cutting a large hole in the instrument board, but cannot be removed without taking considerable time and trouble, making it practically safe from theft. Mounted in a special vibration-proof case, the works are protected from shocks. It sells for $4.

The Paramount, a trim silvered-dial clock, with numerals clearly outlined, is for motorists who do little driving. Aside from dial and a slightly different shape, it is similar to the Glownite in all respects. Price $3.



MANSFIELD'S GLOWNITE (RADIUM DIAL) CLOCK AT LEFT, PARAMOUNT AT RIGHT.

The touring bug begins to bite.

USE
EMSCO
BRAKE LINING

If your motor fails, you can't go — if your brakes fail, you can't stop.

Good brakes are as necessary as a good motor.

Emsco Brake Lining makes brakes dependable—ask for it when you have your brakes re-lined.

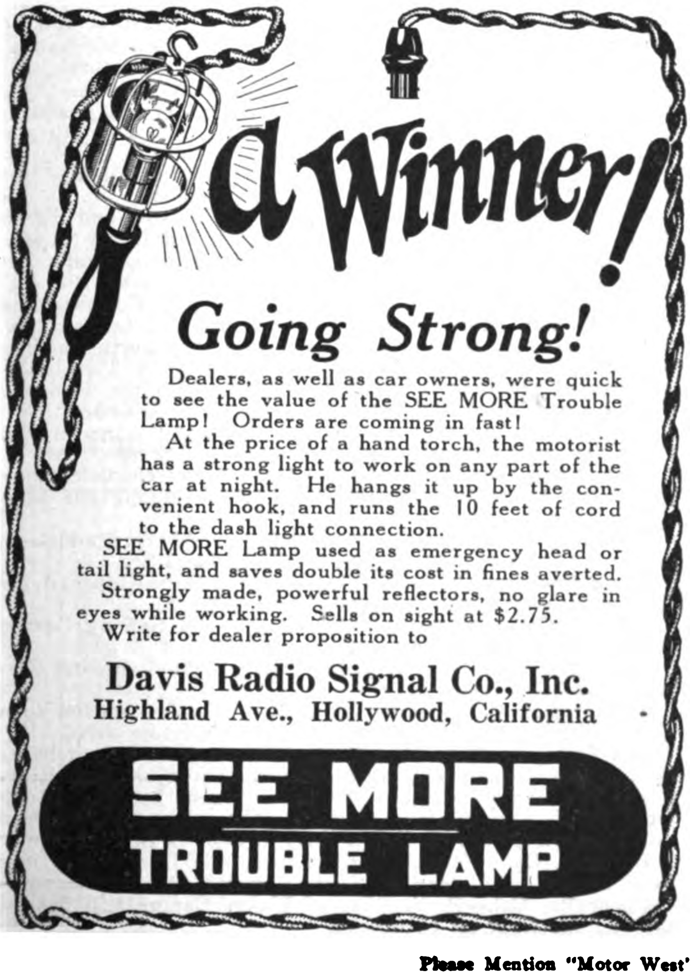
E. M. SMITH CO.
612-642 S. Clarence St.
Los Angeles, Calif.

Spring Again

NOW is the winter of our discontent, of the soldier's bonus and the four power treaty, lost in the thought of placid lakes, of the whirring reel, and the open road. Crank cases, long ignored, are being drained, tuning up is the word in farm shed and city garage, and the voice of the flivver is heard in the land. Drivers the country over are taking stock of tires, replenishing and adding to their tool kits, and harking back to the halcyon days of last vacation for memory's suggestions of touring needs. This was neglected and sorely missed—this taken and never used—and incidents almost forgot come back to point new needs. Coming down that steep grade, on compression and braking all the way, my foot was done brown before those eight miles were safely behind us. And that bird that liked my side of the road better than his—on a hairpin turn. Foot slipped off the brake and hit the accelerator and there we were locking horns like a pair of rutting bucks. Nobody hurt and no serious damage, as luck would have it, but a fender and a headlight gone to glory, and a loss of confidence in my fellow man and my own certainty of control. Why don't they put rubber on those pedals and save us a lot of grief?

And that is where you step into the picture, Mr. Dealer. That man, and a thousand more, is a live prospect for Allen Pads. Never a driver but has felt, one time or other, the need for a slip-proof, cushioned tread on those pedals. He may know nothing of the possibility of supplying his wants or he may read of Allen goods and then forget them when he steps into your place to buy a spark plug or blowout boot. But still he wants them and needs them, and it is his loss as well as yours if he doesn't get them. Ask him to buy and make a friend—at a profit.

If *you* don't know about them, ask your jobber.—Adv.



Going Strong!

Dealers, as well as car owners, were quick to see the value of the SEE MORE Trouble Lamp! Orders are coming in fast!

At the price of a hand torch, the motorist has a strong light to work on any part of the car at night. He hangs it up by the convenient hook, and runs the 10 feet of cord to the dash light connection.

SEE MORE Lamp used as emergency head or tail light, and saves double its cost in fines averted.

Strongly made, powerful reflectors, no glare in eyes while working. Sells on sight at $2.75.

Write for dealer proposition to

Davis Radio Signal Co., Inc.
Highland Ave., Hollywood, California

SEE MORE TROUBLE LAMP

A Live Tip from One Dealer to Another

NATIONAL AUTO ... LE TRAINING ASS'N

Frank Rose Mfg. Co.
Gentlemen:—

I find Rose Tire Pumps always lead their line in sales. That's why I carry only the Rose. It is popular in price and always gives the customer complete satisfaction. No use loading up on three or four lines of slow sellers. That's money wasted when the Rose turns so much faster.

(Signed) E. H. STONE.

Frank Rose Mfg. Co.
Hastings, Nebr.

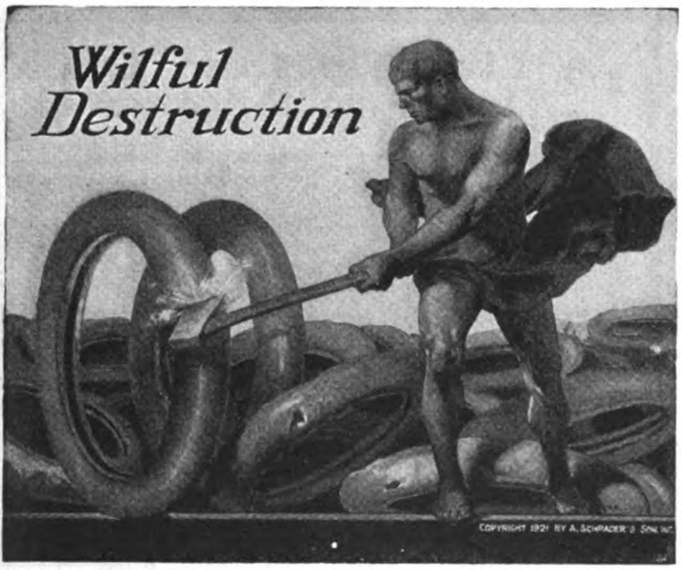
JADSON'S
SUPERIOR MOTOR PRODUCTS

SUPERIOR ONE-PIECE STEEL
MOTOR VALVES

stand the terrific
strain of racing cars

FRANK ELLIOTT, one of the fastest and most experienced drivers in the racing game, is highly enthusiastic about Jadson's Valves. These heat-treated valves, hand-forged from one piece of steel, and accurately ground, are guaranteed not to burn out, pit, scale, or warp. The qualities that enable them to stand the terrible strains of racing make them the ideal valve for every motor. For sale at motor supply houses and garages. Ask for Jadson's.

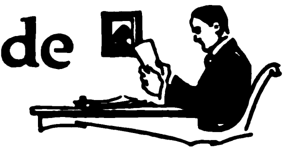
Manufactured by
J. A. DRAKE & SONS, Reedley, Calif.
Sales Department: Allied Industries, Inc.
San Francisco Seattle Los Angeles


Wilful
Destruction
COPYRIGHT 1921 BY A. SCHRADER'S SON INC

We are running this picture with appropriate text in consumer publications of national circulation in order to impress upon millions of readers the absolute necessity of maintaining adequate and evenly balanced air pressure in their tires.
You can do your part in this campaign of education by telling your customers what YOU know about the costliness of under-inflation.
This will not only net you a profit on the sale of SCHRADER UNIVERSAL TIRE PRESSURE GAUGES but will gain for you the good will of your customers.

A. SCHRADER'S SON, INC.
Brooklyn, N. Y.
Chicago Toronto London

Western Trade Notes



San Francisco, Cal.—United Garage Co. will have a 5-story and basement, reinforced concrete garage, to cost $165,000, built on the north side of Ellis St. west of Mason.—R. L. Barrett has been made service manager and Al Tallant, mechanical department manager, for H. O. Harrison Co.—W. R. Cobb, former A. E. F. aviator, has bought an interest in F. A. Oehm Co., Ford agency.

Richmond, Cal.—Star Garage, 415 Bissell Ave., has been bought from Charles Hall by Carl T. Schach and Roy E. Bedbury.—Frank A. Scheles has sold his garage and agency, 1427 MacDonald Ave., to Charles F. and Louis Freese, who have formed Freese Motor Co.

Berkeley, Cal.—A. A. MacDonnell Auto Top Co., Oakland, has opened a branch here, 1941 University Ave., A. E. Scott manager.

Oakland, Cal.—W. F. Ostrander and A. T. Gilesman have bought Will R. Hogan Garage on 14th St. near Alice and have changed it to City Garage.—Paul Friedman has bought entire ownership of Oakland Auto Wrecking Co. from his brother.

Alameda, Cal.—Bell & &Boyd, Oakland, Willys-Knight and Overland dealers, have opened a branch here on Central Ave.

San Leandro, Cal.—Harold Hilton has taken the Chevrolet agency.—E. C. Burger has sold Elliott's Garage on Washington Ave. to Raymond Bush, who will handle Ford cars and Fordson tractors.

San Jose, Cal.—Dean Tractor & Implement Co., 269 W. Santa Clara St., has taken the Cleveland tractor agency.—Bradford Motor Co. is now Durant car dealer for Santa Clara County.

Lodi, Cal.—L. G. Krieger, Ford dealer, will have his floor space doubled by addition of 2000 square feet to his garage, to cost $6500.

Turlock, Cal.—A. H. Hooker will locate his garage in a new building he is erecting on Center St.

Tracy, Cal.—N. O. Lucas has bought O. L. Phillips Battery Shop from Phillips and has opened new quarters on Main St.

Manteca, Cal.—Manteca Motor Co. has been bought from A. B. Buckner by George LeMoin and Andrew Anderson.

Modesto, Cal.—Fern & Manning Auto Repair Works has moved to larger quarters, 708-10 7th St.—E. H. Morris, 705 10th St., has taken the Packard car and truck agency.—C. L. Barnum has bought the fixtures and equipment of Cooperative Garage Assn., formerly conducting a garage at 9th and G Sts., and will operate his own garage here.

Fresno, Cal.—Anderson-Cuthbert Co. has incorporated for $100,000 to handle several lines of cars as dealers.

Hanford, Cal.—Walter W. Cameron, Hudson and Essex dealer, has moved to larger quarters on North Douty St.—L. H. Roberts, handling radiator and sheet iron repair work, has taken over Battle Radiator Shop from W. C. Battle.

Porterville, Cal.—Great Western Auto Supply Co., managed by Globenfeldt Brothers of Visalia, has opened a branch here, Main and Olive Sts.—D. D. Easley, local branch manager for Eliot E. Bradley Co., Fresno, Studebaker distributor, has moved the branch into larger quarters in the Kennedy & McKnight Bldg., Main and Olive Sts.

Bakersfield, Cal.—C. E. Nugent of Crescent Garage on 18th St. has taken the Cooper storage battery agency here.

Santa Cruz, Cal.—Hamilton & Church have remodeled their garage on Front St. at a cost of $2000, doubling the floor space.

San Luis Obispo, Cal.—Maddalena, Dodd & Maddalena, have opened an accessory store, 675-77 Higuera St.

Santa Barbara, Cal.—T. C. Hollingsworth has opened the Hollingsworth Overland Agency on Anacapa St.

Saticoy, Cal.—Lawrence Brigham has sold Saticoy Garage to Russell Lee and Basil Alderman.

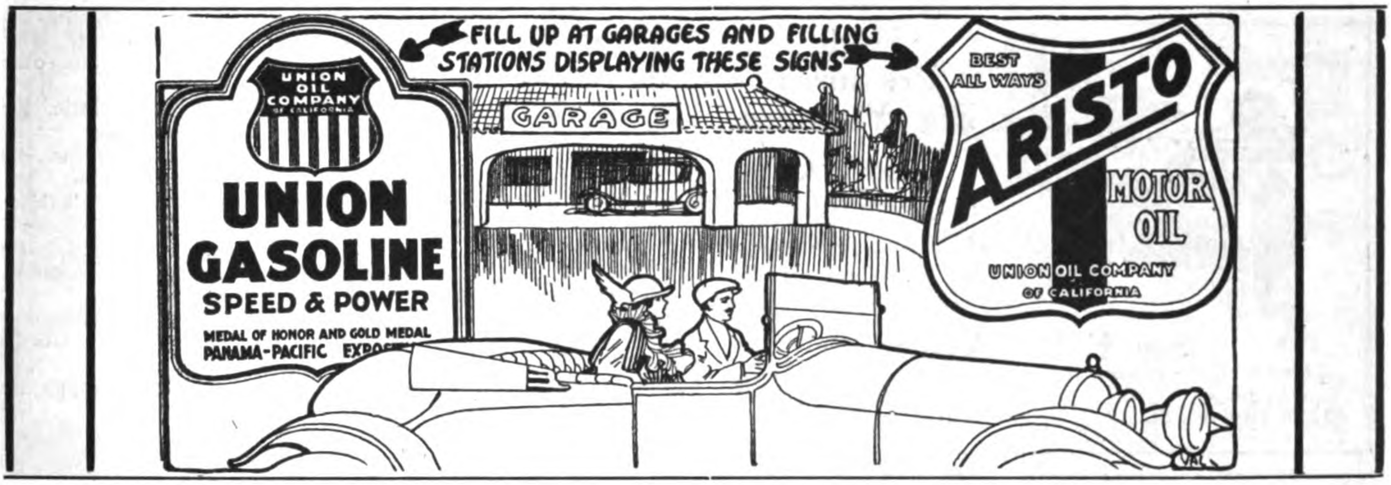
Lancaster, Cal.—Joseph Miller has bought Lancaster Garage from Gus Anderson.

Lankershim, Cal.—Seeley Motor Car Co. has moved to a new building, McCormick Ave. and Lankershim Blvd.

San Fernando, Cal.—Packer Auto Co., Glendale, Studebaker dealer, has opened a branch here in charge of Hal Reardon.—Van Winkel Garage has been bought by Ray Brook from Ralph Van Winkel.—Cliff D. Tucker has sold his Ford and Fordson agency on Porter Ave. to Charles B. Chapman.

Burbank, Cal.—Service Garage, to handle Durant cars, has been opened by M. and A. Santino, and L. M. Boyer.

Coachella, Cal.—R. S. Bliss of Union Garage will have a new garage built on Broadway.


FILL UP AT GARAGES AND FILLING STATIONS DISPLAYING THESE SIGNS
UNION OIL COMPANY OF CALIFORNIA
UNION GASOLINE
SPEED & POWER
MEDAL OF HONOR AND GOLD MEDAL PANAMA-PACIFIC EXPO
GARAGE
BEST ALL WAYS
ARISTO
MOTOR OIL
UNION OIL COMPANY OF CALIFORNIA

HARRY HARTZ

The Boy Wonder, known as the Wizard of the Track, winner of the big classic race in San Francisco, uses the

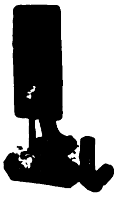
Thomason

Piston Aligner

as do also Tommy Milton, Eddy Hearne, Roscoe Sarles, and Art Kline.

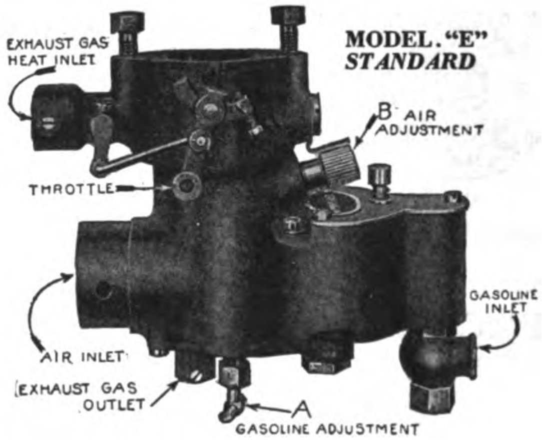
All the big drivers know that perfect alignment of the pistons is necessary for full power from the engine.
The old methods and tests show alignment in only one position. The "plane" system of Thomason Piston Aligners guarantees adjustment to perfect alignment of each piston throughout the stroke.

Absolutely Necessary in Every Repair Shop



Full explanation, details and prices upon application. An obvious necessity in all repair shops aiming to give real service to the car owner.

SHEPARD-THOMASON CO.
Automotive Engineers
506-508 W. Pico St., Los Angeles, Cal.


EXHAUST GAS HEAT INLET
MODEL. "E" STANDARD
B AIR ADJUSTMENT
THROTTLE
GASOLINE INLET
AIR INLET
EXHAUST GAS OUTLET
A
GASOLINE ADJUSTMENT

MARVEL CARBURETORS

GIVE

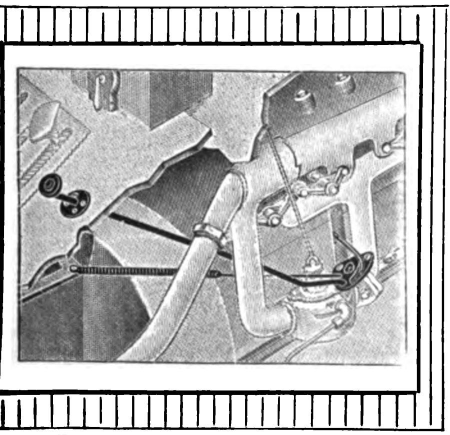
Universal Satisfaction

POWERFUL— ECONOMICAL— SIMPLE—

Write for our new Catalogue

MARVEL CARBURETOR CO.
FLINT, MICHIGAN, U. S. A.

Distributors:
Union Hardware & Metal Co., Los Angeles, Calif.
Motor Products Sales Co., Seattle, Wash.
Edwards-Warden Motor Parts Co., Salt Lake City, Utah



THE EWALD FOOT ACCELERATOR

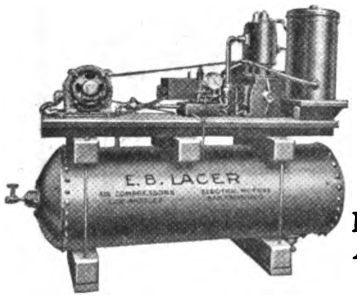
Best in Efficiency—Lowest in Price
Ready to Install on Any Ford Car—75 Cents

No motorist who has driven a car equipped with a foot accelerator would drive without one, and the Ford is the only American made car not so equipped.
The Ewald Accelerator stands in the very uncommon position of being both—
The Best and the Lowest Priced—accelerator on the market.
BEST—Because it is the most efficient, durable and in every way the most satisfactory regardless of price.
LOWEST PRICED—Because of its simplicity in design and quantity production.
Easily installed by any car owner in a few moments' time.

Manufactured by
ROMORT MFG. CO.
Oakfield, Wis.

Dealers and Jobbers—write our sales dept. today for full details.

Sales Department
THE ZINKE COMPANY
1327 Michigan Ave.
Chicago, Illinois



High Pressures Big Volumes

IS THE CALL TODAY

If it is Compressed Air 1 to 80 cu. ft. of air per min.

See E. B. LACER

Air Compressors **Electric Motors**

Los Angeles **San Francisco, Cal.**

1224 East 8th St. **401 Van Ness Ave.**

BALL BEARINGS REGROUND

Large stock of all standard sizes on hand for immediate exchange.

Special Bearings Made to Order

Factory Distributors for New
FAFNIR BALL BEARINGS
BOWER ROLLER BEARINGS

PACIFIC BALL BEARING CO.

415 West Pico St. **Los Angeles, Cal.**

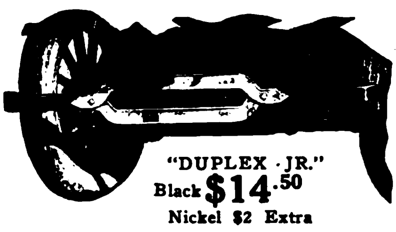
AUTHORIZED VALVE-IN-HEAD Buick MOTOR CARS SERVICE

A Complete Line of Sixes and Fours for 1922

When Better Automobiles Are Built Buick Will Build Them

BUICK

No Dead Stock



Dealers handling NEW ERA BUMPERS carry no dead stock. Attaching brackets are interchangeable for all cars. Rapid turn-over on small investment. Give your customers the most in beauty and strength, at lower prices, and our permanent guarantee. Send for catalog.

"DUPLEX · JR."
Black $14.50
Nickel $2 Extra

New Era Spring & Specialty Co.
73 Cottage Grove Ave., Grand Rapids, Mich.
GRAF SALES COMPANY
Williams Bldg., San Francisco, Calif.

Spokane, Wash—Automotive Electric Service, S218-20 Madison St., has been opened by W. Dickinson, A. M. Oldershaw, Ted Seyl, to handle Philadelphia batteries and other ignition work.

Tacoma, Wash.—W. S. Dulmage Motor Co., Seattle, Durant dealer, has opened a branch here, 702 Broadway.

Portland, Ore.—Armory Garage, Couch and 10th Sts., has been opened by A. R. Hill, B. Pardue, L. Siglinger.

Astoria, Ore.—Skyles Auto Co. has taken the Chalmers and Maxwell agencies.

Eugene, Ore.—D. M. Howard has bought McCornack Garage from W. W. McCornack, who will concentrate on the Franklin agency.

Pendleton, Ore.—Charles Gordon has taken over Simpson-Sturgis Tire Co. on East Court St., changing it to Gordon Tire Shop.

Redmond, Ore.—Angus L. Davies has opened Angus Repair Shop, 7th and F Sts.

Bandon, Ore.—Adolph Kline and Henry Philpott have reopened Pacific Garage.

Oregon City, Ore.—Oregon City Auto. Co., headed by W. T. Swak, has reopened in a rebuilt garage on 6th St.

Enterprise, Ore.—R. M. Steel Motor Co., headed by R. M. Steel, has reopened Inland Motor Co. Garage.

Eureka, Cal.—Western Motor Supply Co., operating a chain of accessory stores in California, has opened a branch here, 4th and E Sts.—Arthur W. Way has opened Way's Garage, 7th and D Sts.

McCloud, Cal.—K. L. Rigor, county agent for Paige and Jewett cars, has bought McCloud Garage from Bert Hippler.

Redding, Cal.—Glover's Garage, Studebaker agency, is building a large addition to care for increasing business.—H. W. Burrichter has opened an automobile top and trimming shop, 339 Pine St.—Guy F. Davis has bought H. H. Wright's partner interest in Red Bluff Garage and is now sole owner.

Corning, Cal.—J. B. Cockcroft, Studebaker and Durant dealer for Tehama and Glenn Counties, will build a new garage on the site of the one destroyed by fire.

Chico, Cal.—W. H. Pillsbury, 2nd and Wall Sts., has taken the Durant agency.—Chico Machine Works, E. C. Scatterlee manager, has opened a parts and accessories store, 716 Broadway.—M. O. Dixon and G. B. Troxel have opened Dixon's Garage, 4421 7th St., for automobile and tractor repairing.

Roseville, Cal.—Gray's Garage, 117 Vernon St., has been opened by T. V. and H. W. Gray, brothers.

Lincoln, Cal.—L. C. Lattin has opened Western Placer Garage, handling Luthy batteries and Savage tires.

Marysville, Cal.—C. E. Dehof has opened Fifth St. Garage for general repair work.—Hubell & Madigan, 620 5th St., has opened to handle Norwalk and Firestone tires.—Reimer's Electric Co., 828 4th St., has opened with the Exide battery agency.

Oroville, Cal.—Waldren Brothers on Montgomery St. have taken the Coast tire agency.—H. Aram has opened Ford Repair Shop, 515 Robinson St.

Sacramento, Cal.—Westinghouse Service Station, handling Westinghouse batteries, has been opened at 1013 14th St. by F. R. Le Febvre and M. P. Cheetham.

Petaluma, Cal.—Mike Rachman has sold his partnership in Rachman & Page Tire Shop on Main St., to Glenn Page, now sole owner.

Sebastopol, Cal.—Girren Brothers have sold Ford Agency on Main St. to M. A. Sophey, head of Sophey Brothers Garage.

Santa Rosa, Cal.—Western Auto Supply Co. has opened an accessory store in the former building of Canopius Mercantile Co., 5th and Mendocino Sts.

Calistoga, Cal.—Electric Garage has been sold by J. R. Clark to F. E. Snow.

St. Helena, Cal.—M. G. Van Deusen of Willard Gates Service Station has taken over the Dodge Brothers agency from W. E. Seeburger.

Cloverdale, Cal.—Jack Warren has opened Jack's Auto Electric Shop in thte former Central Garage building.—J. F. Gilbert and Clare St. John have taken over Tavern Garage.

Colusa, Cal.—Murphy & Power of M & P Garage have taken the Durant car for Colusa County.

Vallejo, Cal.—C. E. Fowler will erect a large addition to Fowler Auto Top Works on Marin St., making it the largest shop in this city.

Blaine, Wash.—Lee Hyde has opened Lee Hyde Garage on Blaine Highway.

Garfield, Wash.—Lee W. Bennett has sold his interest in Bennett Brothers Garage to his brother, Lloyd Bennett.

Aberdeen, Wash.—Cosmopolis Motor Co. will have a new storage and repair garage built at 1st and B Sts.—Wolf-Kelley-Roberts Garage has moved to new quarters, Broadway and Market St.

BALL BEARINGS REGROUND

Immediate exchange on all sizes and types.

Distributors Hess-Bright New Bearings.

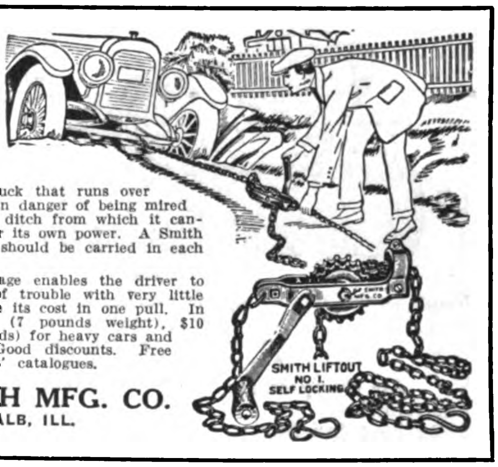
Ahlberg Bearing Company
1708 S. Grand
Los Angeles, Cal.
Portland San Francisco

THE SMITH LIFT OUT **Car Puller**

Every car and truck that runs over country roads is in danger of being mired or of going into a ditch from which it cannot pull itself under its own power. A Smith Liftout Car Puller should be carried in each such car or truck.

Its enormous leverage enables the driver to pull his car out of trouble with very little effort. It will save its cost in one pull. In two sizes: No. 1 (7 pounds weight), $10 list; No. 2 (7 pounds) for heavy cars and trucks $20 list. Good discounts. Free electros for jobbers' catalogues.

C. F. SMITH MFG. CO.
DE KALB, ILL.


SMITH LIFTOUT NO 1 SELF LOCKING

DRAKE LOCK-NUTS

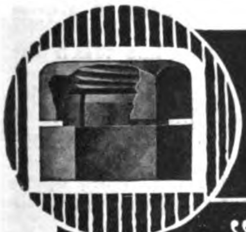
"Never Jar Loose"

SPECIFY ON UPKEEP AND NEW EQUIPMENT

USED BY BEST MANUFACTURERS

WRITE FOR SAMPLE

DRAKE LOCK-NUT CO.
PLANTS: CLEVELAND SAN FRANCISCO



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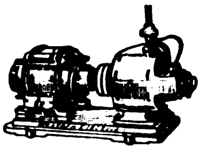
There is a big demand for this efficient, low priced battery. We can make dealers an interesting proposition. Write for details.

Distributors for Delco, Klaxon, Remy and Black & Decker products. Rewinding, Starting, Lighting and Ignition Experts. Batteries Re-charged. Manufacturers of Radio Equipment.

H. N. LANDON ELECTRIC CO.
"Everything Electrical"
306 W. Pico St. Phone 641-15. Los Angeles, Calif.



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SINGER PROCESS PISTON PINS

We Carry a Larger Stock of Pins than Any Exclusive Piston Pin Manufacturer in the United States

We Manufacture Piston Pins for all Makes Automobiles, Trucks and Tractors

Unequaled for quality. 200,000 in stock, ready for shipment to any point. Full particulars, prices and discounts mailed on request.

JOE SINGER MACHINE WORKS
2116 So. Los Angeles St. Los Angeles, Calif.

A Rapid Selling Accessory For Every Make of Car

Reliable Spring Oilers completely cover and lubricate springs. Keep out dust, water, mud, and rust. Bring greater riding comfort, increase tire mileage, add to life of car, stop squeaks, prevent crystallization. Fit all makes and models.

DISTRIBUTORS WANTED

A few territories still open for exclusive Distributors. Unusual opportunity for profit. Only limited investment necessary.

Dealers — Easy sales plan offers quick profits. Write today.

Reliable Spring Oiler Company
205 Reliable Bldg.
32 E. Main St., Columbus, Ohio

Look inside for the name

DELUXE
LIGHT WEIGHT CAST IRON PISTON
"The Successful Light Weight Piston" ©

See the reinforcing ribs running ACROSS THE HEAD to a reinforcing ring.

CLARK-TURNER PISTON CO.
Los Angeles, Cal.

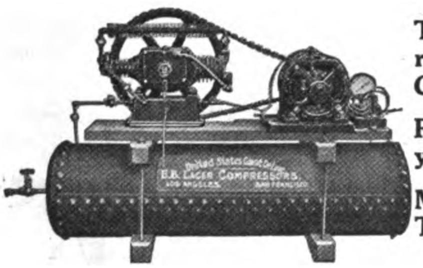
MORELAND MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST



The same reliable U. S. Compressors.
Reliable 10 years ago.
More reliable Today.
Many copies appear in the market but only one original.
The best with patented features
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Air Compressors Electric Motors
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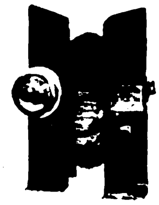

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OUR
Percentage of "Come-Backs" is less than 3%.
Exchange service is of 95% efficiency.
Stock is the largest of its kind in the world.
Our workmanship and materials cannot be excelled.
We Rewind AND REBUILD Armatures
For Automobile Starters and Generators
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Write for Price List and Discount
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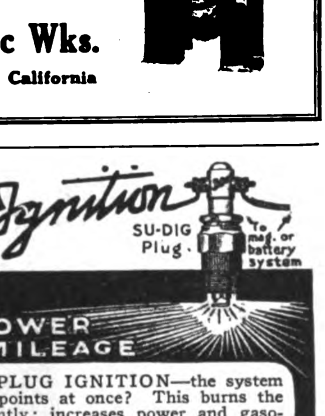
Ordinary Plug
Two Plug Ignition
SU-DIG Plug
To mag. or battery system

MORE POWER
GREATER MILEAGE
DO YOU UNDERSTAND TWO PLUG IGNITION—the system that ignites the gas at two opposed points at once? This burns the mixture completely and almost instantly; increases power and gasoline mileage; saves fuel and lessens carbon accumulation and spark manipulation. SU-DIG Series Spark Plugs added to the plugs now in your engine, give Two Plug Ignition. A wonderful improvement in the running of your car. No change in present system required. Write for booklet, "How to Get More Power." If your dealer does not handle SU-DIG Series Plugs, write Chanslor & Lyon Co., S. F., L. A., Fresno, Oakland, Seattle, Portland. McCoy Motor Supply Co., San Francisco, Los Angeles, Superior Motor Power Co., 77-A Spring St., N. Y.
SU-DIG



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TIMER
FOR FORD CARS
When you sell a DALECO TIMER, you do not merely give your customer a fine timer, but guaranteed timer service for a period of two years and at fifty cents per year thereafter. Write our sales department today for full details
Sales Department
The Zinke Company
1327 Michigan Ave.
Chicago, Ill.
Manufacturers
The Dale Mfg. Co.
1323 Michigan Ave., Chicago

Los Angeles, Cal.—W. D. Candee has moved Fix It Yo-'Self Garage to 1015-17 S. Los Angeles St.—Alamo Garage, 611 N. Western Ave., is now operated by Willis C. Miller.—Hollywood Oldsmobile Co., 5850 Hollywood Blvd., handling Oldsmobiles in Hollywood, has been opened by W. J. Schuessler and A. C. Beatty.—Western Battery Manufacturers, Inc., manufacturing Western storage batteries, has moved from West Vernon Ave. to a new building, 140 W. 16th St.—Giant Rubber Products Co., manufacturing Giant puncture-proof inner tubes, has opened a store and factory, Figueroa and Ottawa Sts.

Caldwell, Ida.—Herman Witteborg, head of Akron Tire Co., has opened a subsidiary establishment, Tire Sales Co., 7th and Arthur Sts.

Butte, Mont.—Fred Woodside has taken over Roy Murray's interest in Montana Auto Supply Shop, and Murray has taken Woodside's interest in Butte-Buick Co., Buick agency.

Salt Lake City, Utah.—During February in Salt Lake County the five authorized Ford dealers sold 48 cars and took 62 orders for March delivery.

Fort Bragg, Cal.—Tom MacMahon has opened on Main St. with Durant agency.

Ukiah, Cal.—Harold Baker has sold his tire shop to Morris McKessen.

Healdsburg, Cal.—Standard Machine Works has taken the Chevrolet agency.

Colusa, Cal.—W. C. Stokes, of Stokes Machine Shop, 8th and Main Sts., has bought the business, equipment and patents of Commonsense Tool Co., Berkeley, and will install the equipment in his shop here.

Chico, Cal.—George L. Cummins and Marcus Olson, opening on Main St., have the Hydro-Toron tire agency for this district.

Redding, Cal.—Homer Hughes has leased the new garage and service station being erected on Girvin St.—Harry W. Lover is enlarging his garage, Market and Placer Sts., by erecting a storage garage.

Berkeley, Cal.—R. E. Hall has opened a repair business, 2008 Addison St., specializing on Hudson, Essex and Dodge cars.—Nelson Scotchler, Ford dealer, has leased the additional story to be added, at a cost of $22,000, to the building he is now occupying at Shattuck and Durant Aves.

Bremerton, Wash.—Heine's Auto Repair Shop has opened at 249 4th St.

Everett, Wash.—Bothwell & Delano have moved to the garage of General Auto Co., Wetmore and Pacific Sts.

Glendora, Cal.—Label & Weber have leased Vermont Garage, Vermont and Electric Sts.

Colton, Cal.—Brad's Garage on West I St. has been bought by Jack Bergland and O. H. Hopper.—Bishop & Beall have occupied the new Crescent Garage.

Banning, Cal.—Vaden Covington has opened an oil station on the state highway, and will later build a garage.

Hemet, Cal.—H. E. Walker has sold his interest in Carmelita St. Garage to C. R. Embry and C. L. Burtner.

Escondido, Cal.—H. T. Lyon will have a garage built for him on Grand Ave., with 7000 square feet floor space.

Santa Ana, Cal.—Wheeler Ignition Works, owned by G. F. Wheeler, will occupy a brick garage, with 5000 square feet floor space, to be built at 5th and Birch Sts.

Hanford, Cal.—L. H. Roberts has opened Hanford Radiator Works, 600 E. 7th St.

Dinuba, Cal.—George Croft Radiator & Fender Works has moved to a new brick building on East Tulare St.—E. J. McDonald has bought half interest in Ford Garage with V. E. Byers, changing the name to McDonald & Byers, formerly Lushbaugh & Byers.

Visalia, Cal.—C-T-C Battery Service, 114 N. West St., has been opened by Chrisman & Thompson, handling Westinghouse batteries.

Merced, Cal.—Merced Vulcanizing Works, owned by C. W. Reuter, has been made Merced County agent for Oldfield tires.

Tulare, Cal.—Buszek, Coasart & Killebrew, Chevrolet dealers, with branches at Porterville and Lindsay, have opened a third branch here, with H. W. Perry manager.

Kingsburg, Cal.—Roy F. Arnold has bought entire control of Main Garage from L. Garrett Hanby, his partner.

Taft, Cal.—R. G. Chambers and T. R. Jackson have opened C. & J. Garage, 101 Kern St.

Burbank, Cal.—Harry B. Watson has opened a Buick agency. 156-8 N. Olive Ave.

Glendale, Cal.—H. G. McLean has reopened Triangle Garage & Service Station, San Fernando Road and Central Ave.

Lamanda Park, Cal.—A. J. Mayer, Pasadena, Oldsmobile dealer for this district, has opened a branch agency at East Colorado and Huntington Blvds., S. B. McDonald manager.

Covina, Cal.—Monrovia Motor Co., Monrovia, has opened a branch sales room, Citrus and Orange Sts., J. F. French manager.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON PINS

SUPER METCO STEEL

PISTON PINS

are made better than necessary from selected steel of special analysis. Annealed on inside to permit of touch core. Hardness, roundness, size and fit, guaranteed.

Standard, .003, .005, .010 sizes for all cars, carried in stock.

MOTORS, EQUIPMENT & TRACTOR CO.
Phone Pico 3201
1341 S. Hope St. Los Angeles

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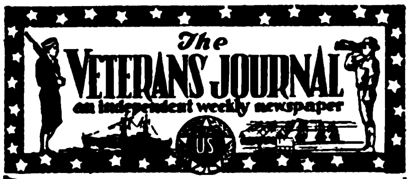


DEALERS, GARAGEMEN and EMPLOYEES

MANY of you are ex-service men—vitally interested in politics, politicians and public policy. The Veterans' Journal is an independent weekly news paper—we are not a part of nor do we represent any political faction or veterans' organization. We will at all times endeavor to discuss impartially all matters of public interest, especially to ex-service men and their friends along the entire Pacific Coast.

The subscription price, $2.00 per year, gives you fifty-two copies of the best Veterans' paper west of the Rockies (by veterans we mean those who fought in the late war, Spanish-American and Civil War).

Mail your $2.00 to-day—your paper will come to you promptly every week.

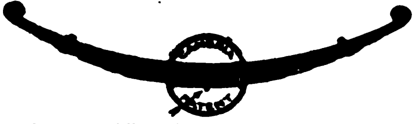
THE VETERANS JOURNAL
119 Henne Bldg.
122 W. 3rd St., Los Angeles, Calif.

BUSHINGS

BUSHINGS—BRONZE Machined to Size or Rough Castings
Impellers, Packing Nuts and Pump Shafts
Phillips Bronze Bushing Works
1460 E. Washington St., Los Angeles, Cal.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

SPRINGS



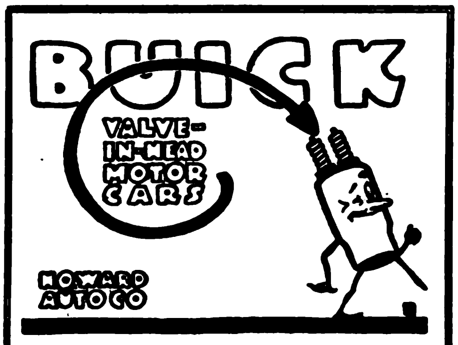
Cambria Spring Company
"Known the West Over"
CHROME VANADIUM AND CARBON
Steel Springs

"CAMBRIA" Twin Bar, the Unbreakable, Rattle and Squeak Proof Bumper

Madison Oilkipps
High Grade Second Growth Hickory Wheels
Springs, Wheels and Bumpers Repaired.
Wrecking Jobs Our Specialty.
Tire Racks and Platforms Applied
Forgings Demountable Rims Applied

916 SO. LOS ANGELES STREET
Main 1076—65233 Los Angeles

AUTOMOBILES

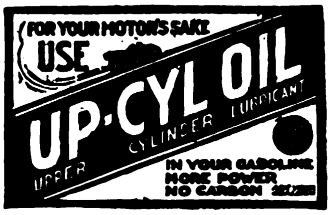


1323 S. Flower St. Los Angeles

HELP WANTED

SALESMEN WANTED:—We are increasing our Traveling Sales Force; therefore a few live salesmen with a knowledge of the wholesale automobile accessory business, willing to invest from $3000 to $5000 in 8% Preferred Stock of the Corporation (as all our salesmen must be members of the Corporation), have the opportunity to get in with an old established, well-rated and well-liked Manufacturers' Sales Agency, traveling on salary and expense account in the Southern, Pacific Coast, Central West and New England territory. Address, Box 657, City Hall Station, New York City.

LUBRICATING OILS



See Signature of C. C. Bogardus on Can

At Your Dealer's

At Your Dealer's

For lubricating all upper parts of a motor, such as the valves, guides, valve stems, seats, cages, upper cylinder walls, and the sealing of the combustiton chamber with a fine film of oil by vaporization.

WEST COAST SUPPLY CO.
900 S. Grand Ave. Los Angeles

PISTON RINGS

THE RING THAT CURES oil burning motors after others have failed is the genuine and original Oil Kontrol piston ring made by Sunset Mfg Co., L. A. Look for the name, beware of imitations. Jobbers and Distributors write for territory

SUNSET MFG CO., 1328 E. 6th St.,
Los Angeles, Calif.

Mattison Goes to Rico.

Charles A. Mattison, sales engineer of Philbrin Corp., Kennett Square, Pa., has left that company to take over the sales management of Rico Ignition Co., Pittsfield, Mass. Edward B. Jacobson is at the head of the Rico Co., which started manufacturing April 1. It will cater to automobile manufacturers, principally, in ignition systems, and small patents will be developed. Mr. Jacobson has been in the ignition business 27 years, having only recently severed his connection as president of the J. & B Mfg. Co. Mr. Mattison has been in the ignition business for the past 18 years, having started with the Pittsfield Spark Coil Co. 18 years ago.

* * *

To Make Corrugated Tube.

Corrugated Rubber Corp. of New York has been organized to manufacture the No Ceem corrugated inner tube, described as being "moulded in one perfect oval in cross section, without splices, seams or creases." The tube is corrugated on the outside to facilitate circulation of air between the tube and shoe and to prevent sticking. Headquarters will be in New York and a plant will be erected at Poughkeepsie. The company is capitalized at $1,500,000. W. L. Fairchild, inventor of the process by which the tube will be made, will be vice president. The Edward A. Cassidy Co., manufacturers' sales agent, in New York, will distribute the product.

* * *

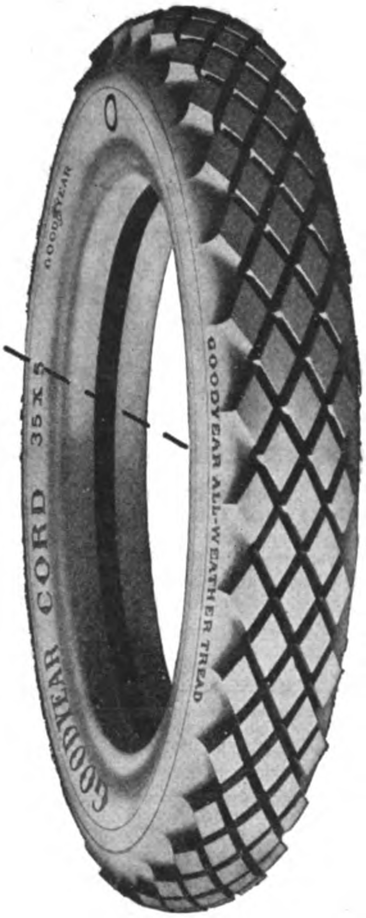
A dispatch from Southampton, Eng., says representatives of Henry Ford have agreed to purchase from the city government a site for an automobile factory to cost 500,000 pounds.

CYLINDER REGRINDING CYLINDER REGRINDING

B-N Carbolux PISTON PINS
DO NOT WARP OR BREAK

QUICK SERVICE A SPECIALTY
Jobbers in Principal Cities
For List See Ad of Apr. 15
BURGESS-NORTON MFG. CO.,
526-548 Peyton St. Dept. D Geneva, Ill.

Veteran Goodyear users tell us that our tires today give more than twice the mileage they did ten years ago



The average decrease in the price of Goodyear Tires since the year 1910 is more than sixty per cent

QUALITY WAS NEVER SO HIGH PRICES NEVER SO ATTRACTIVE

Because they are able to offer vastly better tires at prices more attractive than ever, Goodyear Dealers who are alive to these advantages are doing a good business.

For, so far as tires are concerned, the good values of "before the war" are now more than equaled.

Today, Goodyear Tires give more than twice the mileage they did ten years ago, according to veteran Goodyear users.

Yet Goodyear prices are less than half of what they were then, the average decrease in price since 1910 being more than 60 per cent.

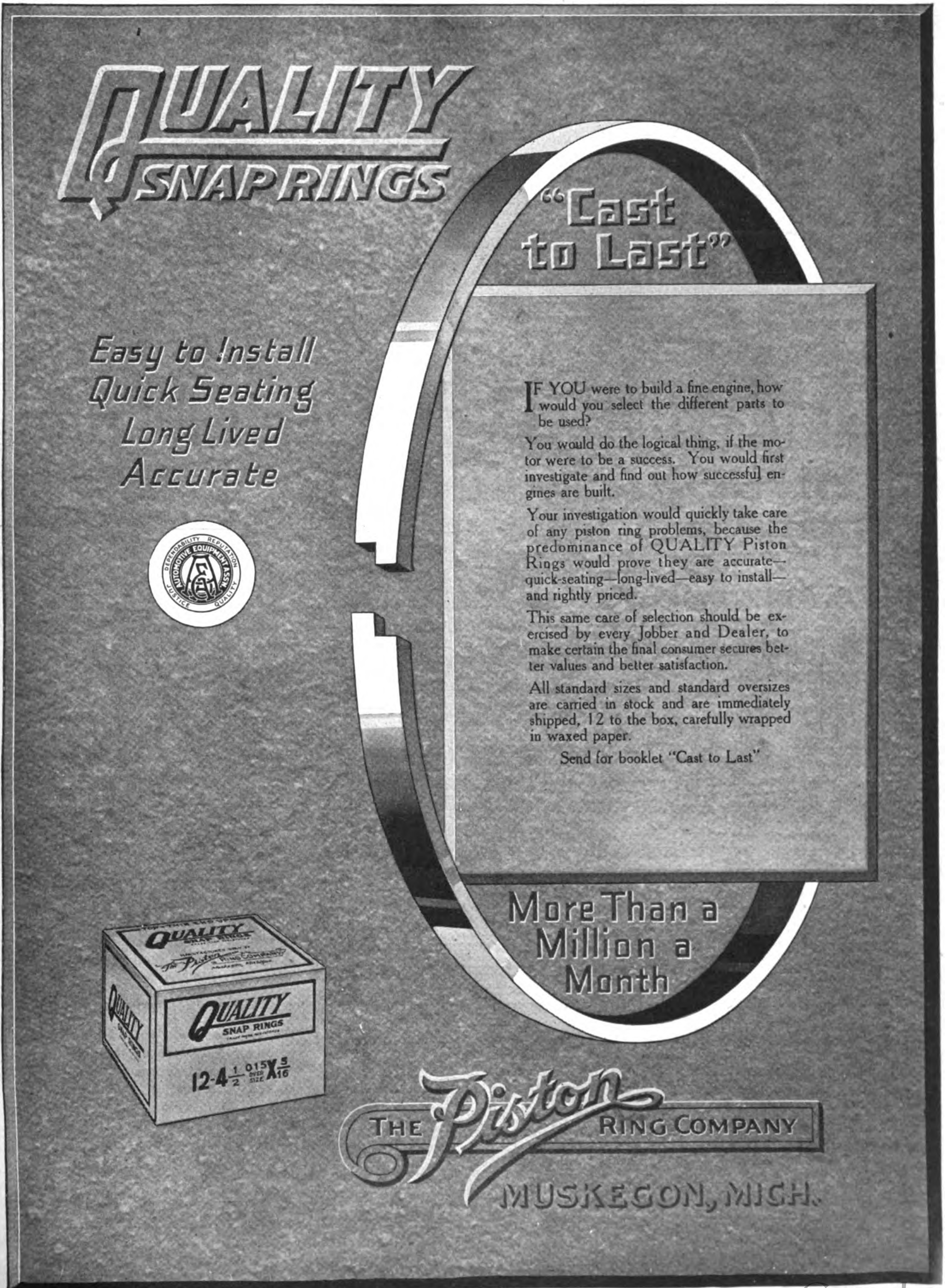
Naturally, more car owners prefer Goodyear Tires now than ever before.

Automobile dealers who sell Goodyear Tires find their patrons are pleased and prospects are influenced by the economy of Goodyears.

If you want to be a Goodyear Dealer and share in the advantages every Goodyear Dealer enjoys, write at once to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.



AUTOMOTIVE EQUIPMENT ASS'N
DEPENDABILITY REPUTATION
JUSTICE QUALITY
QUALITY SNAP RINGS
The Piston Ring Company
QUALITY SNAP RINGS
12-4 1/2 .015 OVER SIZE X 5/16

QUALITY SNAPRINGS

Easy to Install
Quick Seating
Long Lived
Accurate

"Cast to Last"

IF YOU were to build a fine engine, how would you select the different parts to be used?

You would do the logical thing, if the motor were to be a success. You would first investigate and find out how successful engines are built.

Your investigation would quickly take care of any piston ring problems, because the predominance of QUALITY Piston Rings would prove they are accurate—quick-seating—long-lived—easy to install—and rightly priced.

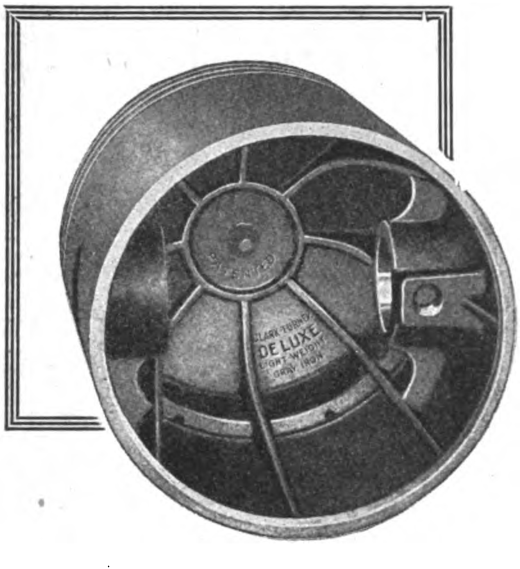
This same care of selection should be exercised by every Jobber and Dealer, to make certain the final consumer secures better values and better satisfaction.

All standard sizes and standard oversizes are carried in stock and are immediately shipped, 12 to the box, carefully wrapped in waxed paper.

Send for booklet "Cast to Last"

More Than a Million a Month

THE Piston RING COMPANY
MUSKEGON, MICH.



There is a strong demand among motorists for a lightweight cast iron replacement piston. Read how completely DELUXE meets this demand.

Install DELUXE Pistons Now

Tell every motorist,---show him,---convince him!

Today is the day of the lightweight cast iron piston,—the DELUXE piston. Tell your customers why close grain cast iron is admittedly the best metal. Show them how lightness and strength are both obtained in DELUXE lightweight cast iron pistons.

Weigh DELUXE pistons and ordinary pistons on your scales in front of your customers. Let them see for themselves that DELUXE pistons are 40% to 50% lighter than ordinary stock factory cast pistons.

Your customers help to sell themselves DELUXE

You know how people handle goods displayed on your counters;—it pays to leave a DELUXE piston on display so your customers can inspect it closely. Keep a little stack of DELUXE literature by the DELUXE piston, but tell the DELUXE story yourself to everyone,—don't depend entirely on a folder or booklet. Show how the reinforcing ribs extend from a reinforcing ring in the head, across the head and along the sides of the DELUXE piston.

A DELUXE piston is so unique,—so obviously right for the purpose, that your customers help to sell themselves while they are inspecting it.

Tell them why they need DELUXE

Then explain how DELUXE pistons save power because they are so light. Explain how DELUXE equipped motors go further and faster per gallon of gasoline, how they have excess power for long hard pulls or tough going;—how they will throttle down slower and accelerate faster than ever before.

Tell every customer how DELUXE pistons practically eliminate vibration at all speeds; giving a smooth even flow of increased power. Show why DELUXE pistons can be fitted very close to eliminate the possibility of oil pumping or gas leakage, because they expand only at the same rate as the cylinder walls.

DELUXE pistons are replacing aluminum pistons without changing the light connecting rods.

More than a million DELUXE pistons sold. Are you getting your share of this business?

It's easy to sell DELUXE pistons when you mean business. We try to do our part by making the best piston we know how and then backing it by nationwide advertising in the Saturday Evening Post and a long list of other publications.

You will find many of your customers familiar with DELUXE pistons. This cuts out half the effort of selling right there. Ask us what others have done with DELUXE pistons. Write for complete details of our unusual and profitable plan of distribution.

All good things are imitated, but look inside for the name "DELUXE." It is there for your protection.

DELUXE pistons and coreboxes for making the same are thoroughly protected by U. S. and foreign patents. We intend to vigorously defend our rights and prosecute all infringers.

DELUXE
LIGHT WEIGHT CAST IRON PISTON
The Successful Light Weight Piston

The DELUXE trademark means exactly what it says. Every day over a million DELUXE pistons are proving the words "The successful lightweight piston."

Patented and Manufactured by

Clark-Turner Piston Company
INCORPORATED
Los Angeles, California

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WE MAKE OLD ONES NEW
A B CO
CHICAGO ILL.

The Sign of Service

Ahlberg Ground Bearings

for Any Type of

Automotive Equipment

Reduce the cost of upkeep by saving the original parts.

Ahlberg Ground Bearings are bearings which have been in actual service and after becoming worn have been repaired. This is done by regrinding the raceways to their original contour and inserting new oversize balls and our own perfected retainer.

Our twelve years' experience in specializing in the repair of worn bearings has taught us how to do this work in a way that enables us to guarantee satisfaction.

There are thirty-five direct factory owned branches maintained at convenient points to give you service.

Take your old bearings to our nearest branch and exchange them for Ahlberg Ground Bearings.

AHLBERG BEARING COMPANY

1708 So. Grand Avenue
LOS ANGELES, CALIFORNIA

Akron Fresno Oakland
Atlanta Boston Buffalo Baltimore Seattle Brooklyn
Cincinnati Cleveland St. Paul Columbus Dallas
Detroit Indianapolis Duluth Kansas City
Memphis Milwaukee Minneapolis Omaha Newark
New Orleans St. Louis New York Portland Oakland
Philadelphia Pittsburgh Providence San Francisco
Washington Toledo Youngstown

Bridgeport No. 16

for all size tires

Cylinder

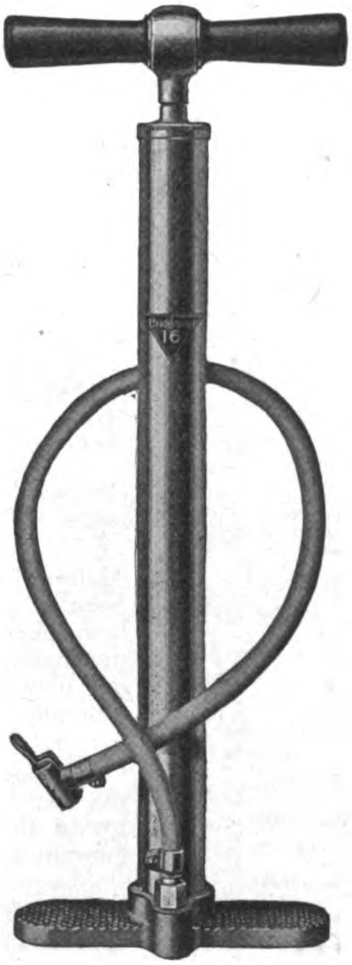
Seamless Drawn Brass will not rust. Perfectly finished inner surface insures smooth, easy operation of piston, and prevents excessive wear on leather bucket.

Piston

Equipped with patented bucket expander which automatically operates bucket under all conditions. High compression insured.

OtherFeatures

Leak-proof base connection
Check valve in base
Thumblock hose connection
Three ply long hose
Full grip handle



Easy Sales

because the superior features of the pump are obvious and quickly appreciated.

Appearance

clearly indicates the excellence of construction.

Performance

Superiority in construction details means better performance.

Guarantee

on material and workmanship protects you in your replacements.

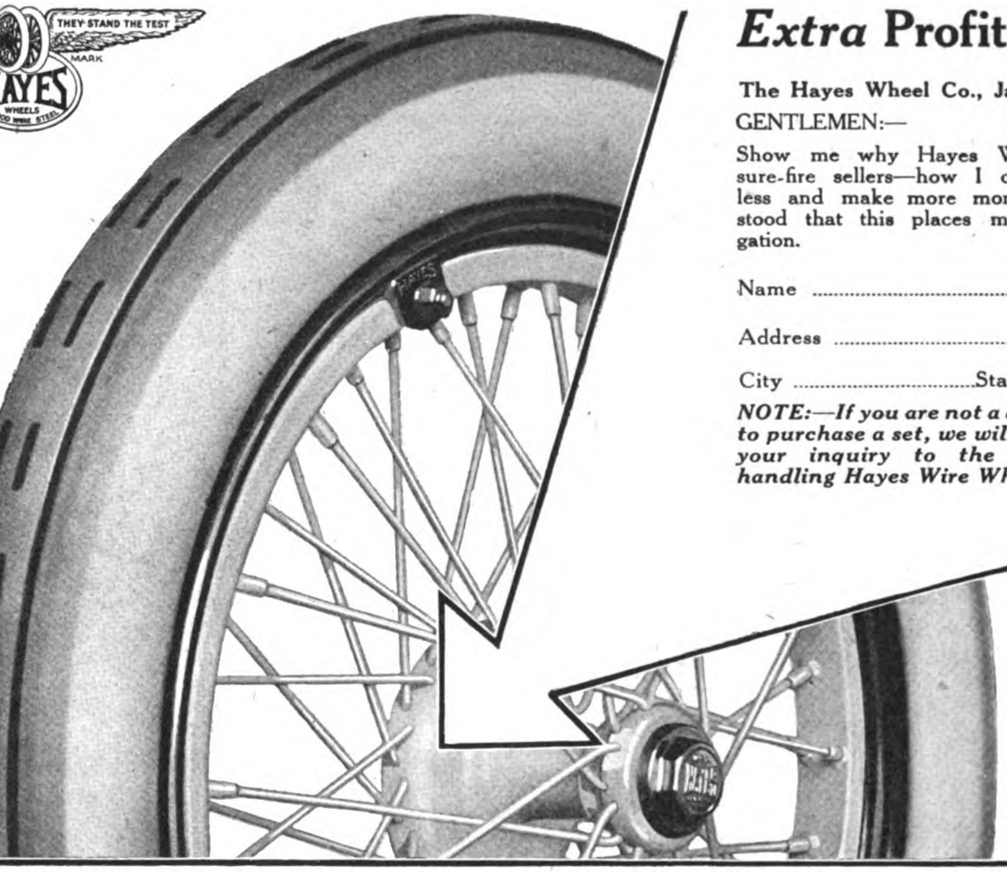
List Price, $3.75

with liberal discount to the trade. Write for our sales proposition.

RUST-PROOF
LEAK-PROOF
Better-Built

Bridgeport Brass Company
Bridgeport 2315 **Connecticut**

THE WORLD'S BEST — THEY STAND THE TEST
TRADE MARK
HAYES WHEELS WOOD WIRE STEEL



Extra Profit Coupon

The Hayes Wheel Co., Jackson, Mich.

GENTLEMEN:—

Show me why Hayes Wire Wheels are sure-fire sellers—how I can sell them for less and make more money. It is understood that this places me under no obligation.

Name ....

Address ....

(F 26)

City ....State ....

NOTE:—If you are not a dealer, and want to purchase a set, we will be glad to refer your inquiry to the nearest dealer handling Hayes Wire Wheels.

TO BE FIRST~WIRE US

OR MAIL EXTRA PROFIT COUPON ABOVE

Six Strong Selling Points

1 One-piece steel felloe, of channel steel, well adapted for assembly of the wire spokes and gives perfect support to the rim.

2 Rim supported front and back by in-rolled bead, excludes dirt. Provides ideal attachment for lugs.

3 Demountable rim lugs permanently attached to rim, eliminating driving studs.

4 Lugs are made from mill-rolled bars. Riveting portion integral with lug. No castings used.

5 Tapered nuts fit countersunk holes in lugs and act as lock-nuts.

6 Integral hub makes wheel interchangeable with wood wheel.

YOU can increase your profits. You can add to your "turnover" without adding to your "overhead." *Sell Hayes Wire Wheels.*

Then you immediately reach a new and wider market—and more important—a market which is daily increasing. You have something to sell the motorist who is driving his car longer and wants to keep it looking well. When car sales slow up you have a ready market, the surface of which has scarcely been scratched.

Nothing so "dresses up" a car as wire wheels—no wire wheel sells or *stays sold* like Hayes Wire Wheels. Every car owner wants them.

The reason is perfectly evident, the Hayes is a different and better wire wheel—"Demountable at the rim." Installed by any ordinary mechanic in five minutes. It has other marked selling advantages. And in addition—you can not only sell more of them—sell them at a lower price, but you can actually make more money on every set you sell. Every owner of a Ford, Chevrolet, Nash, Durant, Earl, Dodge, and other cars is a prospect.

Of all the motor cars produced today, 54% are Hayes wheel equipped. Their makers *know* that Hayes means *dependability* in wheels. *You* can back up Hayes Demountable at the Rim Wire Wheels and be assured that the immense resources of the largest wheel manufacturer in the world will back you.

Look over their Six Strong selling points and mail extra profit coupon. We will send you our complete literature and detailed information on this wonderful new way to make *extra* money. The coupon does not obligate you in any way. Clip it out now before someone else in your town does. Be the first in your town not only to *size up* this situation correctly but *seize* it.

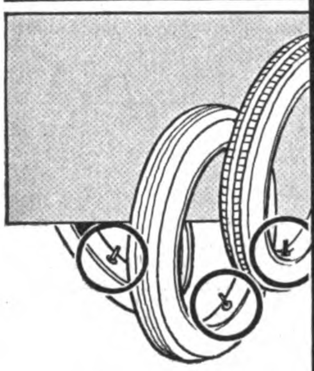
HAYES WHEEL COMPANY *of New York* JACKSON, MICHIGAN

Branches: New York Chicago San Francisco Indianapolis

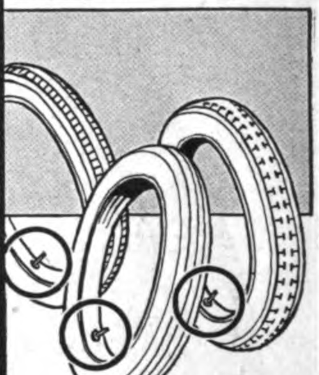
Stocks Carried in Principal Cities

HAYES DEMOUNTABLE AT THE RIM WIRE WHEELS

Please Mention "Motor West" When Writing to the Advertiser



TRADE MARK
TREX
REG. U.S. PAT. OFF.
AIR VALVE LOCK
Positively Locks the Air in Tires
pump your tires only once
Costs only $1.00 for each tire
Pays for itself in extra mileage
Greatest Invention since The Cord Tire
GUARANTEED
AS ARE ALL TREX PRODUCTS
Fits any tire made-Attach them yourself in three minutes
TREX
THE WONDERFUL
AIR VALVE LOCK



Trex Counter Display

This display, in brilliant colors, is one of the many dealer helps we furnish, to back up our national advertising. Write us for this counter display. Sent free to any dealer ordering six or more sets of Trex Locks.

Trex Air Valve Lock

Fits any tire. Any motorist can attach in three minutes. Nothing to take care of.

40 Million

Auto Tires In Use

Every tire in the United States needs a Trex Air Valve Lock—to lock the air inside; end the re-pumping nuisance; and give increased mileage through perfect inflation.

It is the greatest invention since the inception of the cord tire, and is one of the very few fundamental improvements for the motor car made in years.

That is why it has met with instant favor with Motorists everywhere—why dealers in all parts of the country have written for a stock—why some of the finest jobbers already have signed our generous distributor contracts.

Our direct by mail literature, bill-boards, counter and window displays, and continous publicity mean an advertising cooperation so complete that the dealer cannot afford to overlook it.

Get them in stock at once for the demand that is constantly growing. Ask your jobber.

TRADE MARK
TREX
REG. U.S. PAT. OFF.
AIR VALVE LOCK

THE TREXLER COMPANY ~ PHILA. PA.

$

A New Deal *for* Dealers

In producing the New Oakland Six-44, the Oakland Motor Car Company and the General Motors Corporation were definitely guided by one ideal—to make this car the finest light six in America.

This much accomplished, their next ideal has been to make it the country's best selling light six. And this accounts for the very unusual dealer selling agreement which Oakland is offering to dealers.

The unlimited opportunities that the new Oakland Plan makes possible, can only be understood by being familiar with the details. Write or wire and let us explain both in detail.

OAKLAND MOTOR CAR COMPANY
Division of General Motors Corporation
PONTIAC, MICHIGAN

THE NEW OAKLANDS
- *Five Passenger Touring Car*
- *Two Passenger Roadster*
- *Four Passenger Sport Car*
- *Four Passenger Coupe*
- *Five Passenger Sedan*
- *Complete Chassis Only*

The New
Oakland 6-44

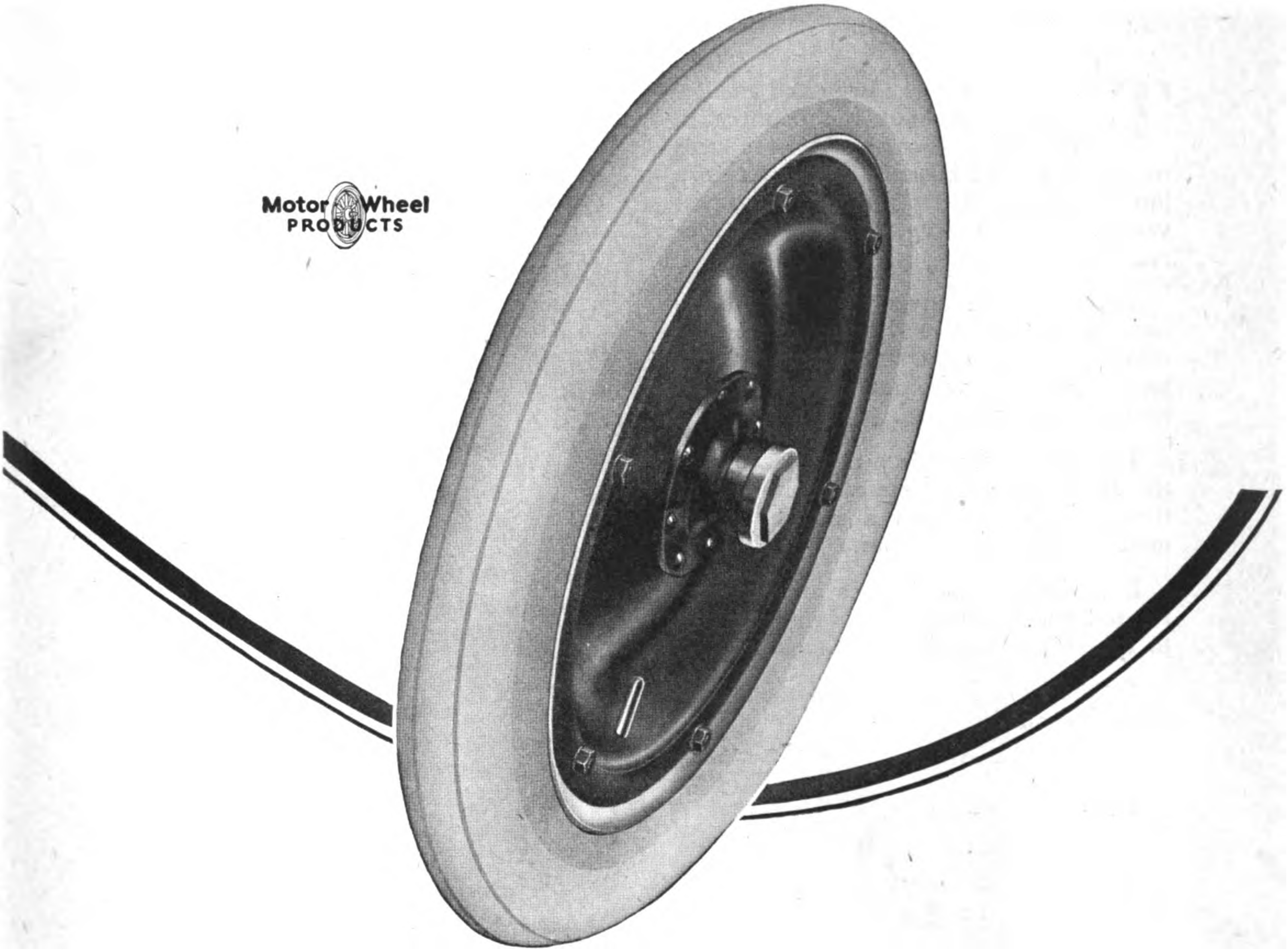
Because Tuarc Wheels have hubs which correspond exactly to the hubs on the car to be fitted, special parts and delay are eliminated. Sales can be closed more quickly. Furthermore Tuarc Wheels are sure to fit as the manufacturer of the car intended the wheels to fit.

Gier

Tuarc

STEEL WHEELS

—a Motor Wheel Product



Immediate Sales

Tuarc dealers know the satisfaction of sales "on the spot."

They can equip most cars immediately because on any particular car Tuarcs fit precisely as did the hubs of the old wheels.

There are no special parts to be carried in stock or to cause delay. No expert labor is needed. There are no extra charges to be explained.

Even the old carrier for spare tires is retained without alterations; because the convenient standard demountable rims are used with Tuarc wheels just as before.

Consequently only four wheels are needed, a distinct saving which gives Tuarcs a notable sales advantage.

All these practical superiorities, including the accessible outside valves pioneered by Tuarcs, reinforce the strong selling power of Tuarc beauty.

Tuarc Steel Wheels appeal to dealers because they appeal most strongly to car owners. Your territory may be open. Write the factory or nearest distributor.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

MOTORS, EQUIPMENT & TRACTOR CO.
1341 So. Hope St.
Los Angeles, Calif.

WILL E. WALLACE
520-37 Van Ness Avenue
San Francisco, Calif.

THERE are many towns and smaller cities throughout the country in which Kelly-Springfield Tires have never been sold because our heretofore limited manufacturing facilities have prevented our appointing agents in these localities.

Our extensive advertising has, however, gone into these places and a demand for our products has been created. Even the man who has never seen a Kelly knows it is good.

The dealer who is in a position to take the Kelly-Springfield franchise in one of these towns will find a market ready made and waiting for him.

If Kelly-Springfield Tires are not represented in your territory, it will pay you to investigate our dealer proposition.

To the right kind of merchant it is a profitable one.

Kelly-Springfield Tire Co.

GENERAL SALES DEPARTMENT

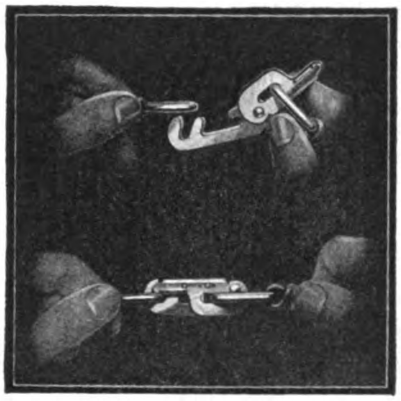
250 West 57th Street NEW YORK, N. Y.

A Revolution in Anti-Skid Chains

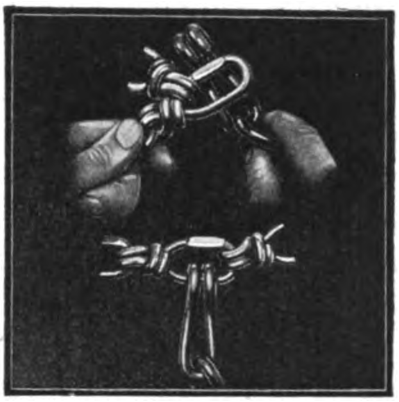
OFF'N'ON Chains were introduced to the trade in December by a simple announcement that told of the tremendous improvements in chain-making to be found in OFF'N'ON Chains.

The announcement went to 125,000 jobbers and dealers. It was widely read, widely commented on, and quantities of orders poured in. For nearly everyone on the selling end of automobile accessories had long felt the missing wants in chains which OFF'N'ON Chains supplied.

Such Features as these:



This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No lost chains—no loose chains. OFF'N'ON has a positive locking device.



This patented slip-on link makes it easy to take off worn-out cross chains and put on new ones.

A child can do it. OFF'N'ON Chains, with these special devices, cost no more.

OFF'N'ON
CHAINS

Write for further particulars, giving name of your jobber

PYRENE MANUFACTURING CO.,

Makers of Pyrene Fire Extinguishers 520 Belmont Avenue, Newark, N. J.

Branches: CHICAGO—17 So. Jefferson St. KANSAS CITY—1712 Grand Ave.
ATLANTA—24 Nassau St. SAN FRANCISCO—977 Mission St.

You must do business at a profit

THE Fisk manufacturing policy may be simply stated:

To create a product which will make it easier for dealers in Fisk Tires to do business at a profit.

We might write a ream and tell you no more than this.

The whole of any business is contained in that statement—"to do business at a profit."

How we carry out our program is well known to dealers who already sell Fisk Tires.

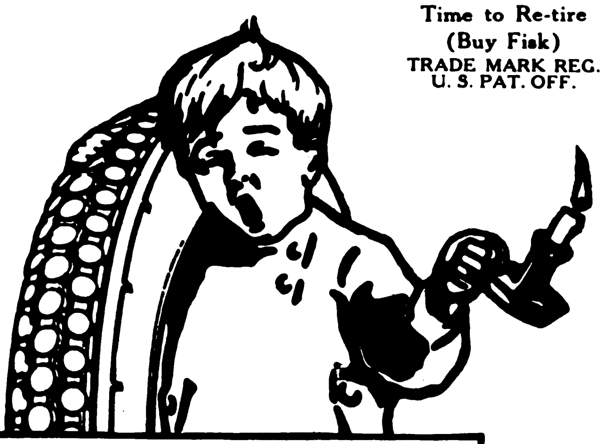
For the benefit of dealers who would like to be certain of an assured future, we shall give the details in a short series of advertisements in this publication.

The foundation of the whole Fisk proposition is the line of tires—cord, fabric, Red-Top, Premier Tread, truck cord and solid.

It meets every requirement of type and price—and so far superior is it to competition that we advertise to the millions of car owners a frank invitation to COMPARE Fisk Tires with all others.

The complete information on the Fisk dealer franchise is yours—NOW—for the asking.

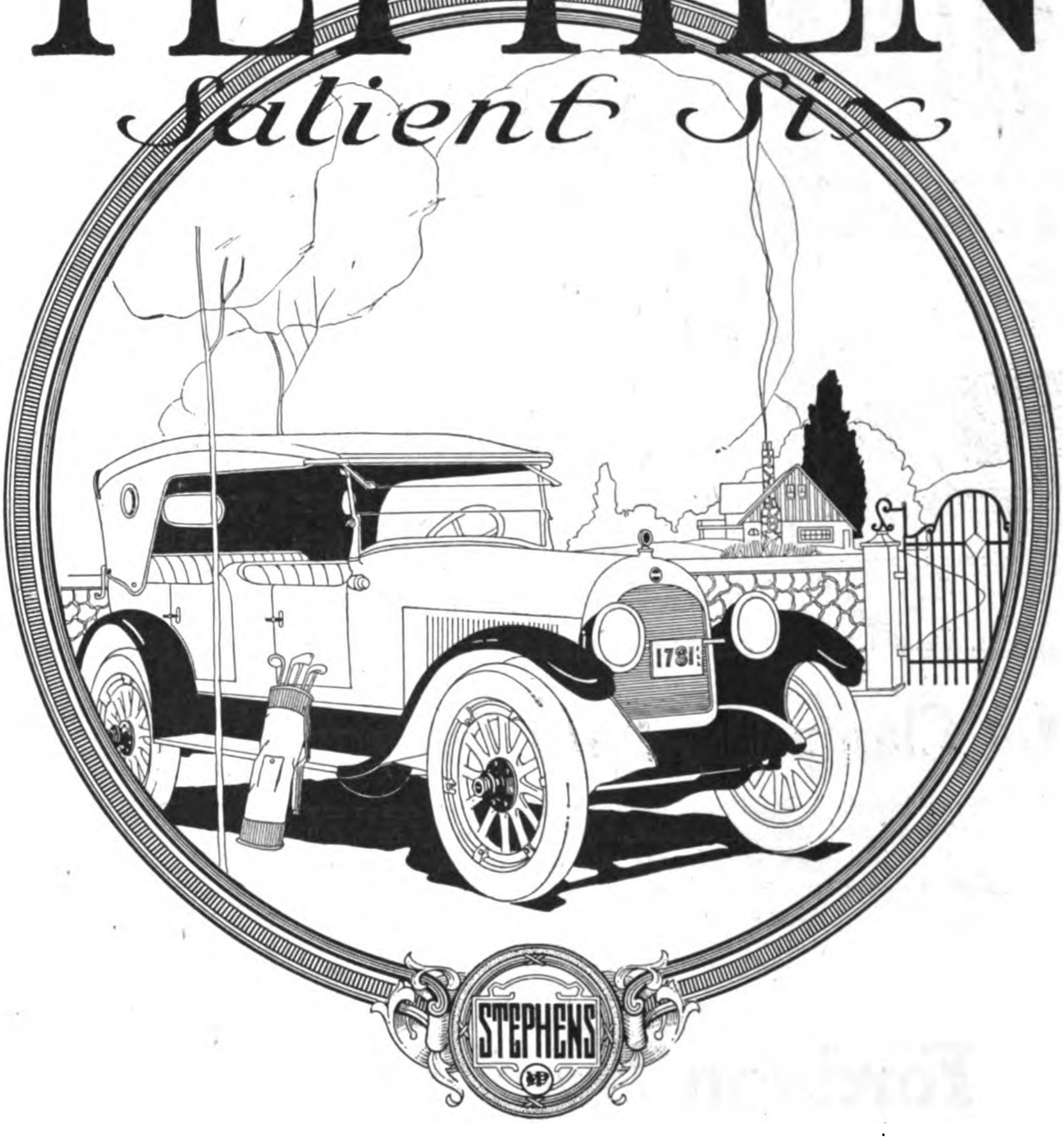
There's a Fisk Tire of extra value in every size
for car, truck or speed wagon


Time to Re-tire
(Buy Fisk)
TRADE MARK REG.
U. S. PAT. OFF.

FISK
TIRES

STEPHENS

Salient Six



It's a Great Car

WITH 31 improvements and refinements, the Stephens Salient Six is a motor car value that has never been equalled.

The Stephens motor with the gigantic energy of its 57 h. p. is the farthest advance in six-cylinder overhead valve perfection. No motor of its power equals its economy of 18-20 miles per gallon.

The highest standard, always! That's the uncompromised ideal of Stephens men! Expressed now with 31 greater refinements! Yet factory efficiency permits $655 lower price than a few months ago.

10,000 owners in letters received this spring enthusiastically acclaim this Stephens ideal! They know! They prove with 100,000,000 miles of service that the Stephens is a Great Car.

Keen automobile merchants everywhere are seeking the franchise for Stephens sales. Write today for details of the new sales-making co-operative contract.

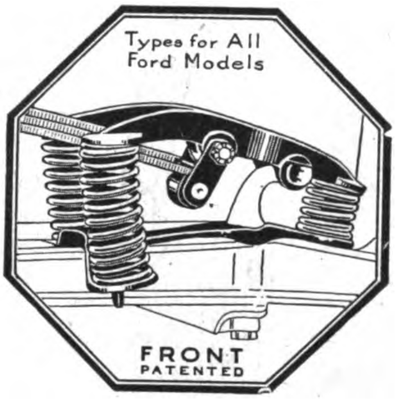
STEPHENS MOTOR WORKS . · . FREEPORT, ILLINOIS

BURPEE-JOHNSON

PATENTED

FloatAforD

SHOCK ABSORBERS



With the famous "third" spring

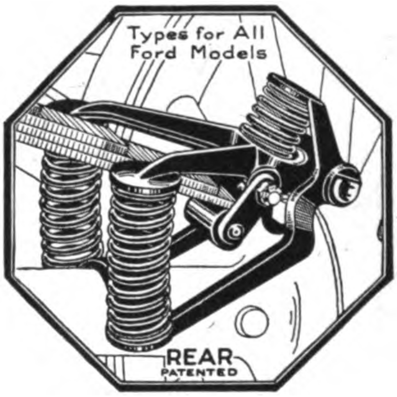
This "third" spring is a patented feature—no other type of shock absorber has it. Before buying any shock absorber for your Ford, see the FloatAforD. The two big spiral springs take the down-thrust while the "third" spring cushions the rebound and absolutely prevents sidesway.

Do Not Clamp the Ford Springs

FloatAforD Shock Absorbers do not bind or clamp the Ford springs in any way. There is no twisting strain forward or backward. Ford springs have full liberty of action just as Ford engineers designed that they should. We positively guarantee against spring breakage.

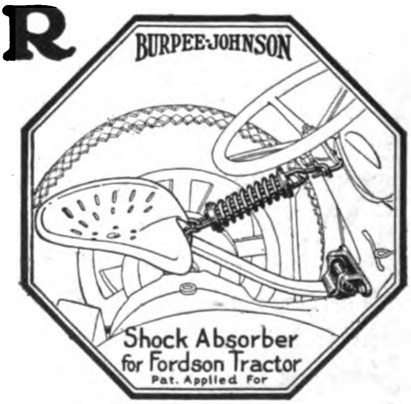
FloatAforDs are correct mechanically and most comfortable to ride upon. Save tires, springs, fuel and reduce wear on the whole car. Sedan and coupe same price as open car types.

10 Days Trial—If not satisfied, these absorbers will be taken off and your money refunded. Types for Ford car and trucks. Special type for cars equipped with external brakes.



Fordson Tractor SHOCK ABSORBER

This wonderful accessory made for the Fordson seat gives added comfort to the driver and insures a greater day's work from the tractor. The bumps and jars from the rough ground in fields or on highways are absorbed and the driver remains at the wheel.



Western Distributors

General Service Co., 1500 S. Hope St., Los Angeles,—Southern California.

C. M. George, 357 Van Ness Ave., San Francisco,—Northern California, Nevada, Hawaiian Islands.

Ballou & Wright, 1515-12th St., Seattle, Wash.

Ballou & Wright, 89-95 N. 10th St., Portland, Ore.—Washington and Orgon.

Every Fordson owner needs one! The spring is quickly and easily attached as there are no holes to drill. The added comfort means much to the driver in saving his physical strength. Made from high-grade materials, fully guaranteed. See this at your Fordson dealers, today.

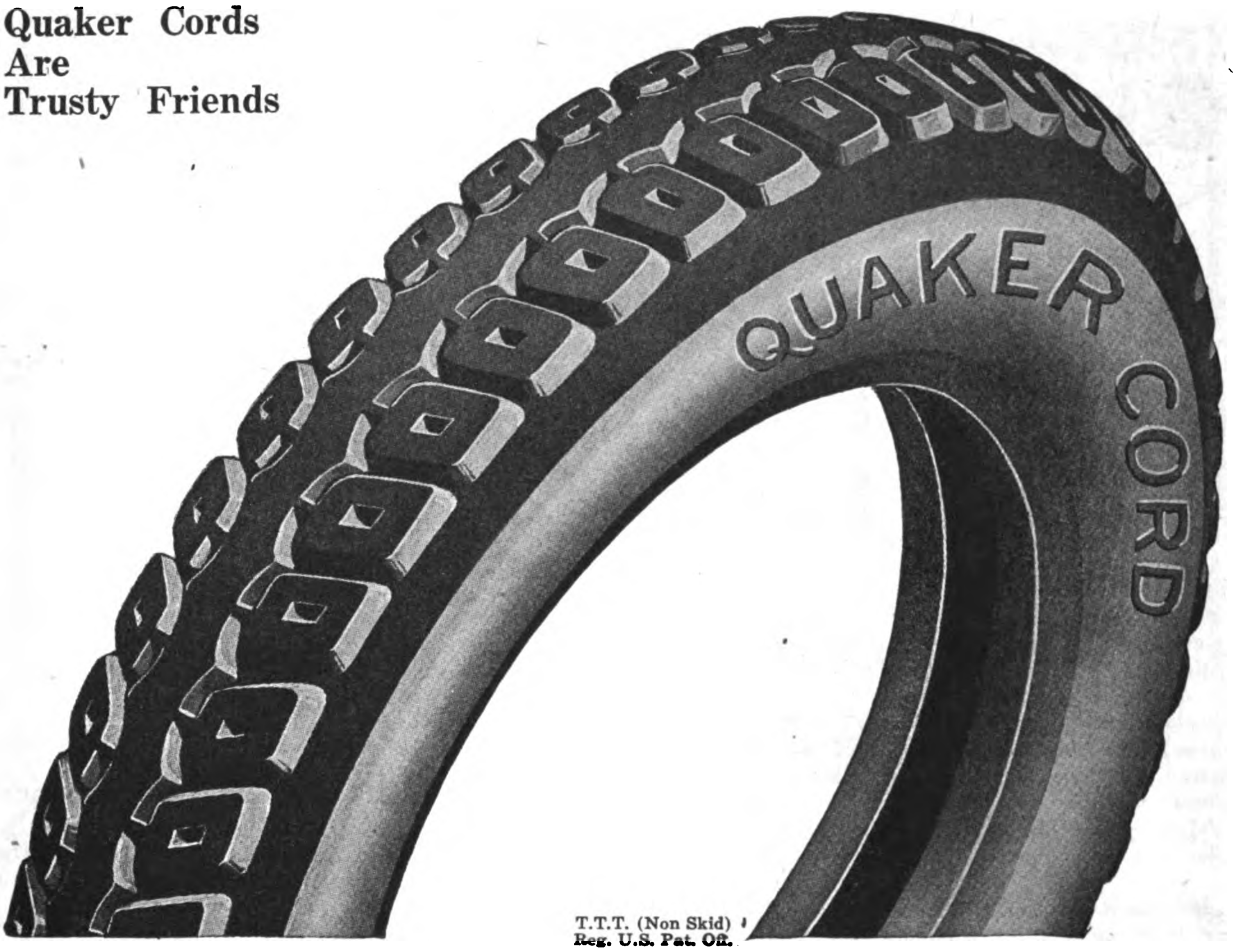
DEALERS MAKING BIG PROFITS

Today dealers selling our line are building an increasing business. Profits are liberal. Customers satisfied. We have some points open on the coast. Write or wire us.

Burpee-Johnson Company, Mfrs.

1918 Singleton Street
Canadian Office and Factory: Automotive Products Co., Ltd.
510 King St., East Toronto
Indianapolis, Ind.

Quaker Cords
Are
Trusty Friends



T.T.T. (Non Skid)
Reg. U.S. Pat. Off.

A STRONG FINISH EVERY TIME

QUAKER CORDS made good from the beginning. It was the service they rendered which created the big demand our dealers are now experiencing.

Anyone can prove them "Miles Cheaper."

If there is no Quaker dealer in your immedate locality, write for our selling proposition at once.

QUAKER CITY RUBBER COMPANY

Established 1885 **Factories—Philadelphia**

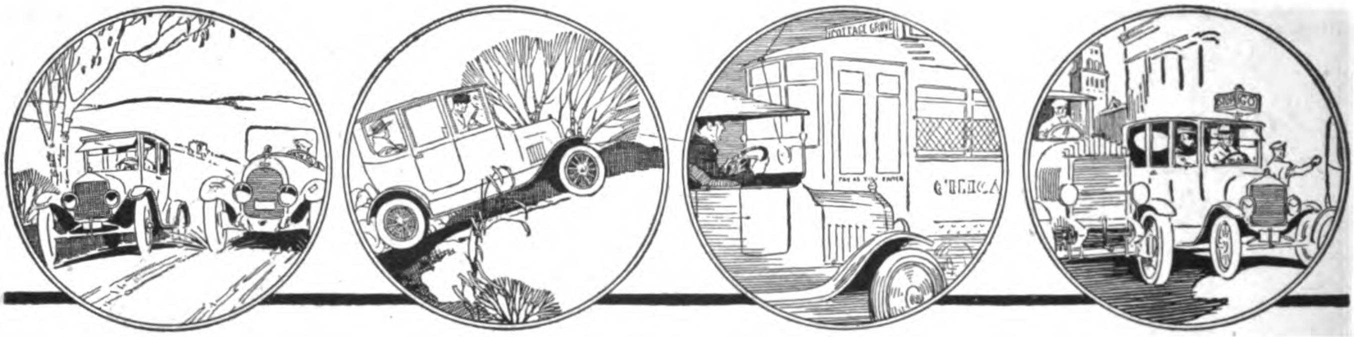
Philadelphia
624-26-28 Market St.

Chicago
182 W. Lake St.

Pittsburgh
211 Wood St.

New York
53 Murray St.

Pacific Coast Office, 304 Williams Building, San Francisco



Responsive Power that Meets Every Motoring Demand

In city and country; in crowded traffic and on the open highway; climbing hills or passing street-cars—wherever and whenever snappy pick-up and an abundant flow of quickly responsive power are needed, the RAJO Valve-in-Head meets the demand.

An acceleration of from 5 to 40 miles in 14 seconds flat; 8 to 14 more horse power added to the capacity of your Ford motor; speeds ranging from 3 to 55 miles an hour in high gear with standard gear ratio—these are some of the things accomplished by the famous RAJO Valve-in-Head. In addition, it gives you from 25 to 35 miles to a gallon of gasoline.

How does the RAJO do it? You wonder—and so have thousands of other Ford owners. Briefly, it's the greatly increased valve capacity, better valve cooling, and direct firing of the Rajo Valve-in-Head that make possible the remarkable increase in power, ready responsiveness, and economy of the RAJO-equipped Ford engine.

Let us send you the complete, illustrated story. It is free and places you under no obligation. Just say: "Tell me more about the Rajo Valve-in-Head." Ask for descriptive pamphlets of other RAJO Ford Accessories in which you may be interested, too.

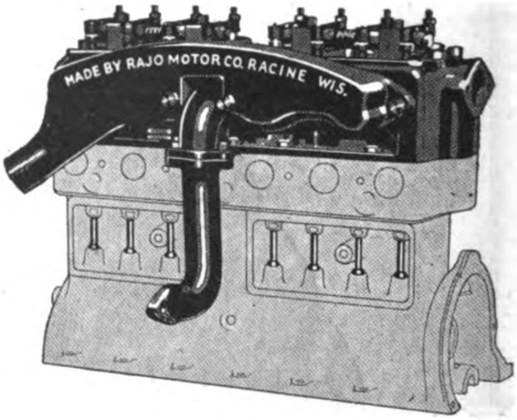
Western Auto Supply Co.

Distributors West of Denver

In making inquiry to this advertisement, write the Western Auto Supply Company store nearest you. Branches: Los Angeles, Long Beach, Pasadena, San Bernardino, San Diego, Bakersfield, Fresno, Stockton, San Francisco, Sacramento, Oakland, San Jose, Seattle, Tacoma, Bellingham, Yakima, Spokane, Portland, Boise, Denver, Phoenix.

RAJO MOTOR COMPANY, MANUFACTURERS,
136 Racine Street, Racine, Wis.

Rajo Valve-in-Head for Fords


MADE BY RAJO MOTOR CO. RACINE WIS.

Other RAJO Ford Improvers

RAJO OIL GAUGE. Provides protection against damaged bearings and scoring of cylinders from lack of oil. This gauge tells you instantly how much oil you have in your crank case. Just lift the hood and read the red-tipped wire. Easily installed. Nothing to get out of order. Price: $3.00.

RAJO WATER PUMP. This is the latest addition to the Rajo line. It is the only pump that does not require a special belt, being driven by the regular Ford fan belt. And it is the only belt-driven pump that will keep right on working in case belt should slip off or break. Does not interfere with original Ford syphon system. Circulates 3¾ gallons per minute. Easily installed. Price: $5.75.

RAJO VALVE INSPECTION DOORS. Prevent oil from leaking out around gasket and being blown back against dash and through pedal openings. Save oil and keep engine clean. Made of extra-heavy metal, reinforced. Price: $1.00 per pair.

RAJO MAGNETO PLUG CONTAINER. Greatly simplifies removing, cleaning, and replacing magneto plug. Ordinarily it's an hour's patience-trying job to do this. The RAJO Container makes it an easy, five-minute job. Price: $1.00.

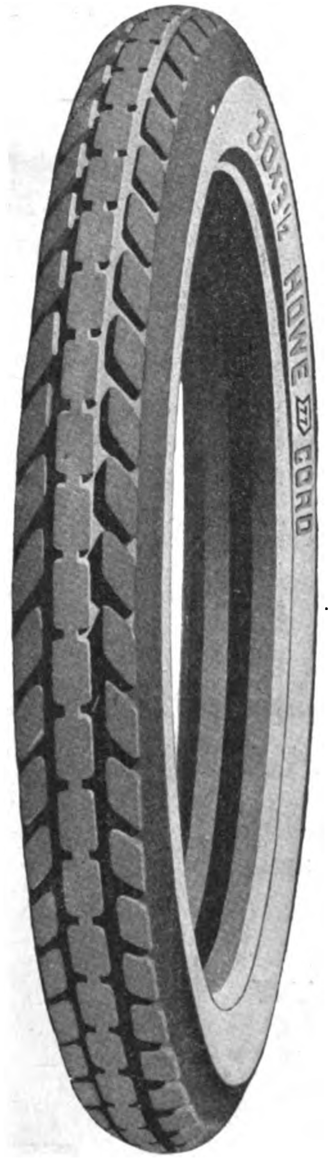
RAJO FUNNEL-FIL OIL CAP. Makes filling the crank case a quick, clean, easy job. Has throat opening four times as large as regular opening. Saves time and oil. Installed in a few minutes. Price: $1.25.

RAJO
ACCESSORIES FOR FORDS

Announcing a

NEW

CORD TIRE



30X3½ Clincher

77 *HOWE MARK*

A full size, sturdy tire with heavy tread and strong side walls.

A bead that we positively guarantee will *fit* Ford rims.

Howe quality throughout.

A price to the dealer that bears immediate investigation.

Here is the tire combination you want.

Now you can get action. Wire or write for mark "77" Howe Cord.

Howe Rubber Corporation
General Sales Offices
Cook Building, Cleveland, Ohio
O. R. Cook, General Sales Director
Factories: New Brunswick, N. J.

WAREHOUSES AND BRANCHES

New York
232 West 58th St.

Chicago
3633 South Racine

San Francisco
824 Ellis Street

Cleveland
1965 East 66th St.

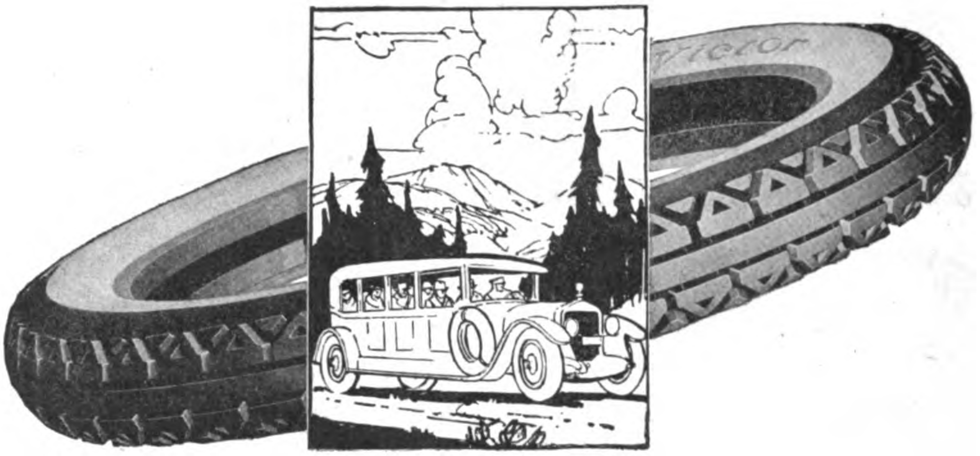
Los Angeles, Cal.
747 Warehouse Street

Atlanta
559 Whitehall Street

Boston—330 Newbury Street

HOWE Tires

CORD AND FABRIC *and* HOWE RED TUBES



"We Are Now Using Victor Tires Exclusively"

That is a characteristic expression of a large number of satisfied Victor Tire users.

A big buss operator adds the following tribute, "Previous to trying the Victor Tires, we used practically every standard make and found them to average about five thousand miles, while the average on Victors is ten thousand."

Here is real quality. The kind that brings repeat business.

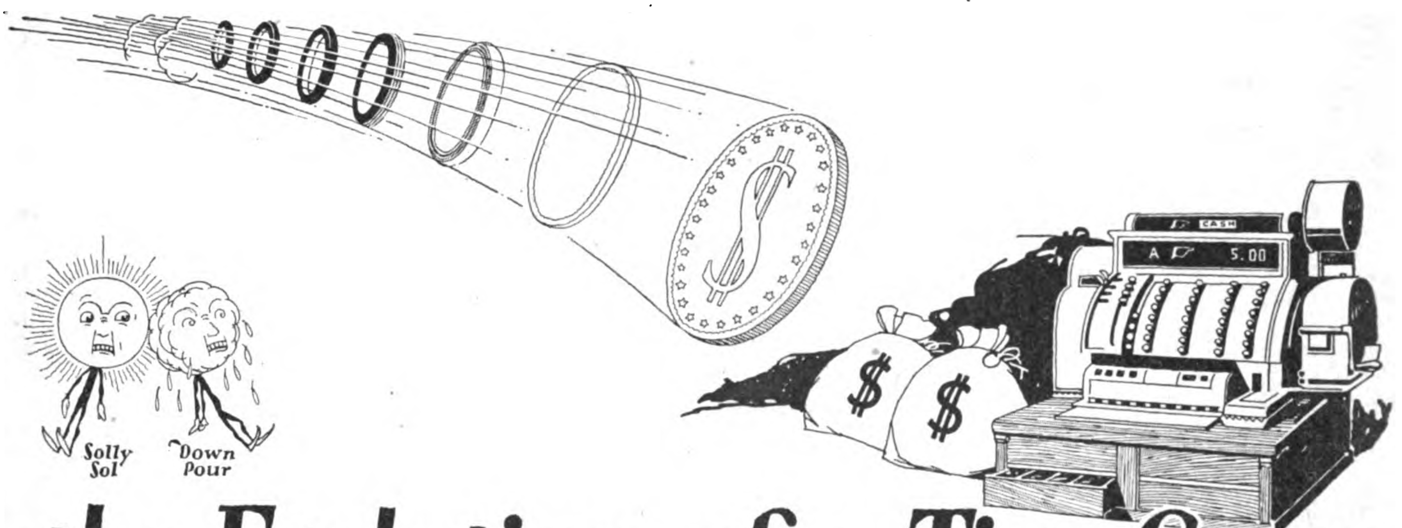
You can *sell* Victor Tires. Write us and we will tell you how.

THE VICTOR RUBBER COMPANY
Makers of Rubber Tires for 23 years
SPRINGFIELD, OHIO

Victor Tires

MILEAGE V Victors

MILEAGE V Victors



-the Evolution of a Tire Cover that should Interest You

Real money out of tire covers. Dollars that roll right into the cash register is what makes the business mare go.

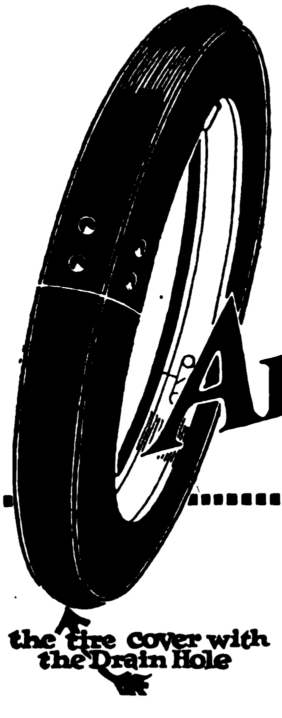
Angelus Tire Covers are making money for dealers everywhere west of the Rocky Mountains. They win friends as well as dollars for you—they help you build a good business reputation.

The summer season is at hand — motorists will soon be swarming on the highways. They all know that the weather ruins their spare tires and a tire cover is their first thought.

It's easy to sell them Angelus Tire Covers—just one look at the way an "Angelus" fits is enough. A double guarantee is an assurance of satisfaction. The material makers and ourselves stand behind them.

Let these tire covers roll the shekels right at you. Ask your jobber to send you prices. Get your order in early—prepare for the crusade against "Solly Sol" and "Down Pour."

The "Angelus" lettering system is an exclusive feature that motor car and tire dealers should know about.


the tire cover with the Drain Hole

Angelus Tire Covers

Manufactured by

PARKER & WATERMAN MFG. CO., Los Angeles

Makers of Tire Covers, Cushions, Automobile Trunks

Dealers Should Order Through Their Jobbers

SCIENCE · RESOURCES · EXPERIENCE · EQUIPMENT

The Standard Oil
ZEROLENE
For Motor Cars

It takes more than a theory to develop Correct Lubrication

No advantage of science, of vast resources, of long experience, of up-to-the-minute equipment and methods, is overlooked by this company in making Zerolene a lubricating oil of the highest quality.

If it were possible to make a better oil than Zerolene, this company would make it.

It is made in five consistencies, one of which is exactly suited to the needs of your car.

Use Zerolene for Correct Lubrication.

STANDARD OIL COMPANY
California

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 3 MAY 15, 1922 $3.00 PER YEAR

IT WORKS BECAUSE IT STOPS IGNITION

Spokane Company Authorized to Issue $500,000 Capital Stock to Make a Remarkable Speed Control.

A speed control device for use on automobiles is to be manufactured in Spokane at an early date by Speed Control Co., Inc., which has been incorporated and is authorized to issue $500,000 capital stock.

Its device is already being used on three cars in Spokane. It is the invention of Giles F. Spiva of N4503 Whitehouse St., Spokane.

"It will control the speed of any car on the market today," said Freeman Jensen, one of the incorporators. "It is attached to the wheel in the same manner as a speedometer, and when the car attains a certain speed the device automatically disconnects the ignition. Then when the car slows down the ignition is connected again. The maximum speed desired can be attained by simply setting the speed control at the figure required, from 20 miles an hour upward. It will insure truck owners that their drivers are in no danger of exceeding the speed limits. Patents have been applied for."

The company has manufactured a few of the speed controls and they are said to be giving satisfaction. As soon as possible a factory will be opened and the device will be manufactured in large quantities. The incorporators of the company are Louis J. McAtee, Giles F. Spiva, and Freeman Jensen, all of the Ideal Laundry Co., Spokane.

Many Factory Heads on Coast.

The list of prominent automotive trade visitors on the Pacific Coast recently includes C. B. Voorhis, vice president and director of sales of Nash Motors Co., Racine, Wis.; George S. Cole, general manager of Leece-Neville Co.; Cleveland; F. C. Millhoff, general sales manager of Miller Rubber Co., Akron; J. A. Benell, factory representative of Haynes Automobile Co., Kokomo, Ind.; Colin Campbell, general sales manager of Chevrolet Motor Co., Detroit; C. E. Salisbury, service manager of Hupp Motor Car Corp., Detroit; W. L. Stockinger, manufacturing engineer of Studebaker Corp., South Bend, Ind.; Maurice Switzer, vice president of Kelly-Springfield Tire Co., New York; M. J. O'Donnell, president of Falls Rubber Co., Cuyahoga Falls, O.

New Stutz Plan for the Coast.

All honor to an able and worthy distributor; but there is such a thing as biting off more than one can chew. That, presumably, is the view of Stutz Motor Car Co. of America. Mention of its new plan for the Pacific Coast was made in the San Francisco news, May 1 issue. The plan is in accord with the fact that the Pacific region is very large, and too good a field to have less than the best cultivation the factory can devise for it.

As stated before, Bruce Daniels, representing the factory, and with his headquarters at 471 Monadnock Building, San Francisco, is arranging for a number of distributorships and has given Bert Latham, of that city, San Francisco and San Mateo Counties. Negotiations are on for other fields. In San Francisco there will be two Stutz service stations. Similar stations will be maintained elsewhere. Stutz parts will be available without delay from any of these or from Mr. Daniels' headquarters. The underlying idea is, as complete and prompt service to Stutz users as though the factory were on the Coast.

Club Building at San Pedro.

Plans are under way for a brick building at San Pedro—which objects to being called Los Angeles Harbor—to be used by the Automobile Club of Southern California.

SPEEDIAC—HOW'S THAT FOR A NAME

Inland Automobile Association Sends National Body an Epithet Suggested By a Washington Woman.

Speediac! That is the name to be officially applied to the reckless automobile driver by the Inland Automobile Association, of Spokane. It is to be the name of the man or woman who exceeds the speed limit, who drives on the wrong side of the street, who cuts corners, who fails to give the proper signals, or who endangers human life by any other violation of motor laws and driving rules.

The name was submitted in a contest conducted by Frank W. Guilbert, secretary of the association, and was awarded first place by the judges. The name was entered by Mrs. A. J Nickle of Republic, Wash., and she will be given the first prize of $10.

Mrs. Nickle's entry was chosen from a list of more than 300 entries in the contest and will be mailed to the American Automobile Association, with nine other selected names, for competition in the national contest for a cash prize of $25.

"Death Flirt" was the name entered by Mrs. Amata E. Marion of Fairfield, Wash., and was chosen second by the judges. Other names and persons making entries that will be sent to the American Automobile Association are: "Scatterdeath," Mrs. C. A. Huckins, Elk, Wash.; "Bone Grinder," E. Gindraut, Spokane; "Vacant Skull," Mrs. B. Daniels, Cle Elum; "Autofool," W. W. Gail, Billings, Mont.; "Me-First-er," F. G. Kennedy, Spokane; "Motoriac," L. O. Crowder, Spokane; "Damnfool," Ed. C. Young, Wallace, Idaho; and "Motormaniac," Frank T. Miles, Spokane.

Foreigners, mostly Americans, have 97 per cent of Mexican oil holdings.

BAY CITY MOVES FOR NEW OUTLET

San Francisco Civic Bodies Urged to Concentrate on East Side Plan for Additional Peninsula Road.

A joint highway district has been formed by San Francisco and San Mateo Counties, to concentrate upon one proposed new route, east of the present one and the Southern Pacific tracks, practically along the western shore of the Bay. This will relieve traffic to and from San Francisco from unprofitable strangulation.

In connection with the proposed route is the plan of bridging the lower end of the bay, either at Coyote Point, east of San Mateo, or farther south at Dumbarton, east of Redwood City. Engineer C. C. Cottrell, of the California State Automobile Association, warns that bridge discussion now is likely to cause delay, and that the issue of immediate importance is the extra road. By means of the road, with or without one or the other proposed bridge, not only will congestion of traffic in and out of San Francisco be eased, but development of, and commerce with, San Joaquin Valley sections will progress much more rapidly.

Supervisors of San Francisco and San Mateo Counties have obtained promise of California Highway Commission co-operation, in the work of the joint highway district and especially by completing a former survey and estimate for a bridge at Dumbarton, and by studying the matter of an alternate crossing of the Bay at Coyote Point. This survey was authorized by the 1917 legislature, and the appropriation is not entirely exhausted. The commission will try to report by September, when it is expected to be a factor in fixing San Francisco's tax rate, which is to be decided at that time.

That bridging is desirable is conceded by all. A bridge at Coyote Point would span considerably more water than one at Dumbarton, but either would be a distance saver from and to Niles, east of the Bay, and the logical distributing point for traffic from points south and east, toward Oakland or to the Peninsula. The distance from Van Ness Ave. and Market St., San Francisco, to Niles via the Southern Pacific automobile ferry across the upper bay, and Hayward, is 31.7 miles; via proposed Coyote Point bridge near San Mateo, 38.3 miles; via proposed Dumbarton bridge east of Redwood City, 45 miles; via Alviso (all highway), 65 miles. The bridges would not lessen the distance but would save 15 minutes to an hour's time, between San Joaquin Valley points and the heart of San Francisco.

As to the proposed upper bay bridge, between Oakland and San Francisco, agitation was lively as early as 1874. Recent estimates of its cost run as high as $80,000,000. No doubt that bridge will be built, in time. Meantime, the Bay City's pressing need is more highway facilities, with a lower-bay bridge of great but secondary importance.

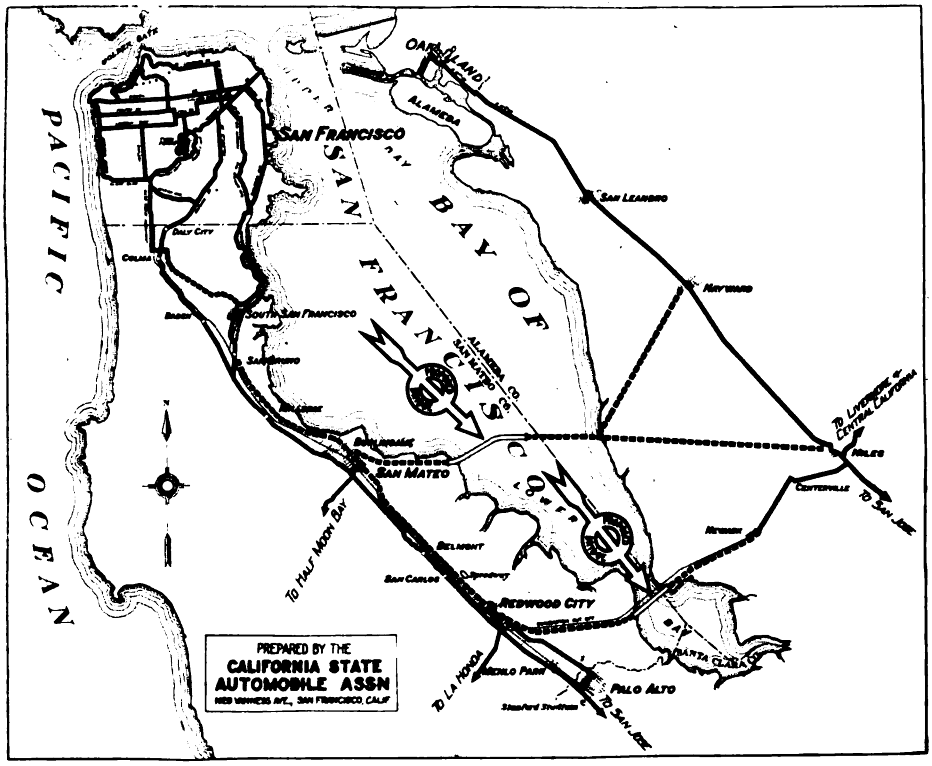
In dwelling upon the present congestion of motor vehicle traffic, Engineer Cottrell cited increase in registration for the whole state, as follows:

1914	123,516
1915	163,795
1916	232,440
1917	306,916
1918	364,800
1919	477,450
1920	574,323
1921	680,614

"And right now," says Mr. Cottrell, "more vehicles are being purchased than ever before.

"When the highway is built it should by all means be of adequate width and substantial type. We should have at least one road leading out of San Francisco of which we may all be proud, and that road should be 40 feet or more in width, and even that road, with the present highway, will serve the traffic needs none too well.

"In designing the roadway cognizance should be taken of the past, when in eight short years the ownership of automobiles in California increased over 5½ times. What would happen down the Peninsula if anything like that increase should take place in the next decade? Then add to that condition of chaos a new territory, made available by a bridge, with all its contributing traffic. Even if that were not enough to add to the confusion we must remember that San Francisco's future expansion will be down the Peninsula. The rapid development of all that territory will necessitate adequate transportation facilities."



THE MAP SHOWS THE PRESENT ONLY HIGHWAY CONNECTING SAN FRANCISCO WITH THE WIDE WORLD BY WAY OF THE PENINSULA; ALSO, BY DOTTED LINES, THE PROPOSED FIRST ADDITIONAL ROUTE, ONE PROPOSED BRIDGE ACROSS THE BAY VIA DUMBARTON CUTOFF FROM REDWOOD CITY, AND AN ALTERNATIVE BRIDGE AT COYOTE POINT (NOT NAMED ON MAP), EAST OF SAN MATEO.

To Ease Bay District Congestion.

On May 1 the San Francisco County board of supervisors granted a franchise to the Golden Gate Ferry Co., permitting a new ferry service, effective about May 15, between San Francisco and Sausalito. This service will cut down considerably the time required to cross the Bay to the North Bay counties.

Not Hugh Chalmers' Cake.

It was reported that Hugh Chalmers, who has been making his headquarters on the Pacific Coast for some time, had become a director in the Hazen J. Titus Fruit Cake Co. It turns out he merely poked a finger of inquiry into the cake proposition in the interest of other persons.

A farm bureau found more than 70 per cent of automotive dealers in its district were doing better than fair business.

DURANT PLANT IS NEAR COMPLETION

Million Dollar Enterprise to Employ More than 1000 Persons Expected to Be Operating in Sixty Days.

Within the next sixty days the factory of Durant Motor Co. of California at Oakland is expected to be in operation. It will add wealth not alone to the community in which it is located, but to the whole Pacific Coast, for the 4800 partners in the enterprise live throughout the entire territory, from Canada to Mexico.

The plant is being erected at a cost of nearly one million dollars, and has 300,000 square feet of floor space, with an annual capacity of 50,000 cars. It will furnish employment for from 800 to 1000 men in the factory, and an office force of over 200. The total payroll will be well in excess of $2,000,000 a year.

The Durant factory is unusual in a number of ways. One of the officers recently remarked that it is one of the few factories in existence that is "built to fit a car." Generally the factory has been built first, and the floor space requirements figured out in the area available, often making operations cramped and cumbersome, making additional and unnecessary costs of manufacturing. But at the Durant factory, the engineers knew before they designed the building just how much space each operation would require. They figured it out so the material could be unloaded at one end of a long wing, where the operations could be performed one after another in the most efficient manner as they proceeded down the straight line of the assembling room. The chassis materials are assembled on the first floor, while the body work is done on the second floor, at the same rate of speed. When the completed chassis arrives at the end of its assembly line, the completed body is ready to be lowered on it and made fast. Then the complete car is ready for the testing room. Here it is tuned up by expert mechanics, who see that it is in perfect running order before it leaves the house. From there, the cars are rolled to the loading docks just outside, or to the adjoining warehouse.

Every piece of machinery in the factory will be of the most improved and efficient type, for automobile manufacture must not only be carried on with the utmost accuracy, but also with considerable speed, if the car is to be built for a price that will enable it to compete successfully under the present market conditions.

The efficient production of any commodity depends as much on the spirit of the workmen as upon the buildings and tools. This is the human equation in industry. Contented, enthusiastic workmen can and will produce more than those men working under the handicap of conditions which are not to their liking. At the Durant factory, everything possible is being arranged to give the workmen a chance to do the best possible work. The whole place will be flooded with light from the steel-sash fenestra windows which take up practically all of the wall space. Heating and ventilation are to be taken care of in the most scientific manner, to make working conditions as comfortable as possible. Each workman will be provided with an individual locker and washstand. A lunchroom in the building will provide the best of meals at a very moderate cost.

Plans are being made for the production of 10,000 Durant Fours per year. In addition to this, the Durant Co. has a contract to build 40,000 Star cars per year for the Star Motor Co. of California.

DECIDED GAIN.

Pronounced increase of activity has been characteristic of many basic lines of industry during the past month. It has been particularly noticeable in the metal working industries, while metal mining operations have also reflected the tendency toward an upward movement. In steel and iron manufacture it is now estimated that, taking the industry as a whole, about 70 per cent of plant capacity is being utilized. The automobile trade has shown a very decided gain. Active demand for building materials has had a favorable effect not only upon the metals but also upon other lines of industry. The total value of building permits for March was almost twice as great as that for February and more than twice as great as that for March, 1921.—Federal Reserve Board.

To Begin on Star Next Autumn.

Norman De Vaux, president of the Star Motor Co. of California, the selling organization which will handle the cars in the West, states the Durant plant in Oakland will start assembling the Star car in quantities early in September.

The Durant plants throughout the country will build the cars and the Star Co. will sell them.

"The Star is a product of W. C. Durant and his engineers and has several features of the Durant Four on a small scale," says Mr. De Vaux. The first car was unveiled in Washington, D. C., a month ago, and created somewhat of a sensation in motoring circles. Since that time the Durant interests have been swamped with inquiries from dealers who want to handle the line. The car will sell in the lowest priced field and will be built in all models. A Continental motor will be used, together with standard parts and a selective type transmission."

New Sales Head of Chevrolet.

F. N. Coats has been appointed sales manager of Chevrolet Motor Co. of California, with headquarters at the assembly plant in Oakland, succeeding R. H. Mulch, resigned. He has been in the industry 21 years, was several years Chevrolet branch sales manager at St. Louis, and before that supervised Overland distribution for the entire territory west of the Mississippi. His appointment was made known at a Chevrolet dealers' luncheon in Oakland by Colin Campbell, general sales manager of Chevrolet Motor Co., Detroit, and a visitor on the Coast. April production at the Oakland plant exceeded 5000 cars, as many as 275 being turned out daily.

Joins Smith-Booth-Usher Co.

C. Alan Walker has been named as director of advertising and sales promotion for Smith-Booth-Usher Co., Los Angeles and San Francisco, well known Pacific Coast machinery and supply concern. For three years he was advertising manager for a prominent Oakland company, and before that was with a large advertising agency in the same city. His headquarters with Smith-Booth-Usher will be in Los Angeles.

Dealer for Marvel Carburetor.

F. H. Simon, head of Marvel Carburetor Sales Co., Los Angeles, will handle the Marvel carburetor for California, Nevada and Arizona. He was a Kansas City dealer of long standing, and later connected with Marvel Carburetor Co., Flint, Mich. Headquarters have been opened at 1837 South Flower St., Los Angeles.

India Tire Dealer in S. F.

Otto J. Smith, with sales room at 701 O'Farrell St., San Francisco, has been made exclusive India tire agent there, according to Frank L. Ryan, Pacific Coast manager of India Tire & Rubber Co., Akron. Mr. Smith has 12 years' experience with large tire factories.

Goodyear Resumes Boise Branch.

Reflecting greatly enlivened business conditions in the Rocky Mountain region, Goodyear Tire & Rubber Co. of California has re-opened its branch at Boise, Ida., closed since November 1920. T. B. Trent is manager, located at 1112 Main St.

WINNERS OF THE 50 AND 100 MILE COTATI RACES.

PIETRO BORDINO.
Won 50 Mile Race.

JIMMIE MURPHY.
Won 100 Mile Race.

COAST IDEA GOES TO TOP AT COTATI

Murphy's Record Breaking Victory Is Evidence That California Engine Ranks With the World's Best.

Excuse the preface—there's a regional-pride reason for it.

"The East always will do your manufacturing," said an Eastern factory man, in a Pacific Coast hotel lobby, several years ago. He was much mistaken as to how much manufacturing was being done on the Coast, and how manufacturing on the Coast was growing. The writer has not met him since. Perhaps he knows more now. He could have learned something by being at Cotati, California, on May 7. On that day, at that place, one of the Coast's manufactured products, an automobile motor, proved itself worthy of competing with the best automobile motors made anywhere else in the wide world. What is true of that motor is true of a number of other things made on the Coast; and one reason why it is true is that a large percentage of manufacturers elsewhere cannot see a mountainous opportunity so far away as the one on the Coast, or, seeing it, they lack the kind of wisdom Mahomet had. He went to it.

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It's Sunday, May 7, at Cotati. Eleven skilful, nervy pilots of some of the speediest automobiles obtainable are there to compete in a 50 mile and a 100 mile race. Old Boreas is there to hinder them. A cold, gray day, with rain clouds threatening. Only a few thousand people present—too bad for the men who financed the thing: they were unintentional philanthropists. They provided a means, however, for a feat which emphasized the point made in the preface, and it is to be hoped they will share in the prosperity that may ensue from the emphasis.

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The feat was the breaking of the world automobile records for 50 and 100 miles by Jimmie Murphy, who used a Duesenberg chassis fitted with a straight-eight motor with eight carburetors, designed and built by Harry A. Miller, vice president of Leach-Biltwell Motor Co., Los Angeles.

That is the big fact about the Cotati meet. Next in importance is the fact that Frank Elliott, who finished second in the 100 mile race and also broke the record, used a Leach special car, built by the same man; and let's add that Tommy Milton's Durant special, with which he has won some of the most notable races in automobile history, has a motor of the same make. What follows is, in importance, mere detail; interesting nevertheless.

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The 11 contestants at Cotati, their mechanicians and machines, were:

Bordino—Bruno	Fiat
De Palma—Marcenac	Duesenberg
De Paolo—Houghton	Frontenac
Elliott—McKee	Leach
Hartz—Fengler	Duesenberg
Hearne—Heffernan	Duesenberg
Klein—McAllister	Frontenac
Murphy—Olson	Murphy Special
Sarles—Ansterberg	Duesenberg
Thomas—Nielsen	Duesenberg
Wanderlich—Butler	Duesenberg

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First there was the 50 mile race, won by Bordino in 26:13.36, averaging 114.4 miles per hour. Hartz was second in 26:15.33; Murphy third in 26:41.88; Sarles fourth, Elliott fifth, Klein sixth, De Palma seventh, Wanderlich eighth, Thomas ninth. De Paolo did not start in this.

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Then the 100 mile event, won by Murphy. For the first fifty miles, which he did in 26:00.33, he averaged 115.35 miles an hour. Previous record, 115.2, was by Milton in a 50 mile race at Los Angeles, April 2, 1922. Murphy did the 100 miles in 52:01.23 at 115.34 miles per hour. Previous record, 110.90 was by Hearne at Cotati on August 14, 1921. Elliott finished second to Murphy in 52:08.52, Hartz third in 52:09.12. Sarles was fourth, Klein fifth, De Paolo sixth, De Palma seventh, Thomas eighth. As is shown later, Bordino, who started, was out in his 72d lap—motor afire. Hearne did not start in this race.

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In the 50 mile race the principal excitement was among Bordino's numerous Italian friends. Elliott took the lead, Thomas and Wanderlich following. In the fourth lap Hartz and Murphy passed Elliott. In the sixth Bordino passed Hartz and Murphy. In the 10th lap Bordino was in second position, and in the 11th he took the lead "for keeps". There was practically no change after that. Hearne retired in his 21st lap with a broken valve. Hartz in his 22d lap passed Murphy to second position, and finished second, Murphy third, and so on as stated.

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In the 100 mile race Elliott took the lead. Bordino was second for 9 laps, then dropped back. In the 10th lap, the average that far being about 114 per, Murphy took the lead from Elliott in the backstretch, with Hartz third and Bordino a bad fourth. Presently there were two groups, with Bordino between them. Up ahead, Murphy, Elliott and Hartz were close together. Murphy led part of the time. So did Elliott. Unfortunately, Bordino, when in his 72d, (not 73d, 74th or 75th as variously stated), was out when his engine caught fire. He had been lapped by the leaders, by that time. A few laps from the end, Murphy and Elliott pulled away from Hartz and the three finished as told. In the second group, Wanderlich was out after a few laps with spark plug trouble. Sarles went to pit early and lost two laps but caught up and in his 73d lap he passed Klein, De Palma and De Paolo, who were playing a game of see-saw. The goal of each man in this bunch was fourth money. Sarles got it, and Klein landed next, and De Paolo nosed out his uncle, De Palma.

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Earl Cooper, driving against Father Time, broke the 25 mile stock chassis record in 15:27.95, averaging 96.81 miles per hour. Previous record (class B, stock chassis) was 90.19 miles per hour, by Mulford, at Uniontown, Pa., May 20, 1921. Mulford used a

Paige. So did Cooper, who had the 6-66 Daytona speedster in which, at San Carlos, April 16, he broke the 10 mile stock chassis record. He had a special body for the chassis.

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Murphy got $3320 for winning the 100 mile event. Bordino got $1660 as winner of the 50 mile race.

—

Murphy did not receive his car until three days before the race. Mr. Miller went to Cotati himself to help tune it up. It ran "like a sewing machine", but it didn't win the 50 mile race, and immediately thereafter Mr. Miller got out his little box of mechanical remedies for such cases made and provided, and did a little adjusting on each of the eight carburetors and in the 100 mile race Murphy had all the power and speed he needed.

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The day before the race, Murphy lost his rear right wheel while rambling at 118 per, in the homestretch. Passing over a spot where, a few minutes earlier, Starter Wagner had been busy clocking the men in practice, the wheel ran up the track to the top rail, then down and—as though it had all been so arranged—rolled through an opening not more than 4 feet wide in the infield rail, through a similar opening farther in the infield, and at high speed bounced on the ground and clear over the top of the score board, at least 15 feet high and not far from the center of the field.

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It was said Earl Cooper will try for more stock car records with the Paige, privately, at Los Angeles and on the beach at San Diego.

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One machine which was not in either Cotati race was the Lanspar special piloted by Nordenschau. The day before the meet, in practice, the motor burned. Even the track caught fire. Supertitious folks please note the car was No. 13.

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Maybe the disconcerting wind made the gentlemen in Klein's pit fail to signal Klein that Sarles was in the same lap. Had Klein known he might have landed fourth in the 100 miler.

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Except for Indianapolis, Cotati was Hearne's last speedway race for awhile. As told, before, he has signed for a vaudeville stunt.

Other cars than Hearne's also had Disteel disc wheels, but that one is called a Disteel-Duesenberg because the Disteel people own it.

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Tommy Milton did not compete. His chassis for the Indianapolis race, as yet unnamed, will have the same type of motor as Murphy used at Cotati—and Miller says it will be much faster. The Durant special that Milton has been driving to victory, also with a motor built by Miller, is named after its owner, R. C. Durant, head of Durant interests on the Pacific Coast. Its motor has not eight carburetors, however.

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In the first race, the 50 mile event, there was a backstretch nearly-howdedo between Bordino and Hartz. Some say they grazed—not grass, but wheels; anyway, Hartz had to slow up, which gave Bordino a chance to do the other thing, which he did.

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Murphy's right rear wheel staid where it belonged, in the 100 mile race, but the tire became worn and Murphy nursed it till he had only six laps to go. Then he went.

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Frank Elliott and his Leach had the good wishes of the crowd and experts. The latter say, watch his smoke at Indianapolis. His Cotati showing is regarded as his best so far.

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Bordino traveled some laps in the 50 miler at 116 per. He showed improved ability to handle his allegedly too heavy car (about 2400 pounds, they say), in speedway work.

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Mr. and Mrs. Ray Harroun and their son, Ray, Jr., visited in Santa Rosa several days before the meet. Hearne used Harroun's Disteel-Duesie.

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From Cotati to Torino, Italy, presumably via Indianapolis, for Bordino. He is not entered for the Hoosier classic. He will start in the Italian Grand Prix on the Brescia course, in his famous 3-bottle Fiat. During his stay in California he enjoyed the Durant Four put at his disposal by Amerigo Bozzani, of Los Angeles, formerly also of Torino.

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Thomas did not leave his vermiform appendix in the Fresno hospital; and chances are that if he will read up on that subject anywhere near as carefully as he studies his car, he need never part with the little necessary grease cup. It can't be replaced, and the rule is that those who lack it never function the same.

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Motor West's race reports caused a number of calls for the May 1 issue in San Francisco. Charge the delay in the customary batch of papers getting there to the "news" company. Time was when such companies made quick deliveries. Now they are accustomed to receive publications long before the date of issue. The word "speed" is not in their lexicon any more.

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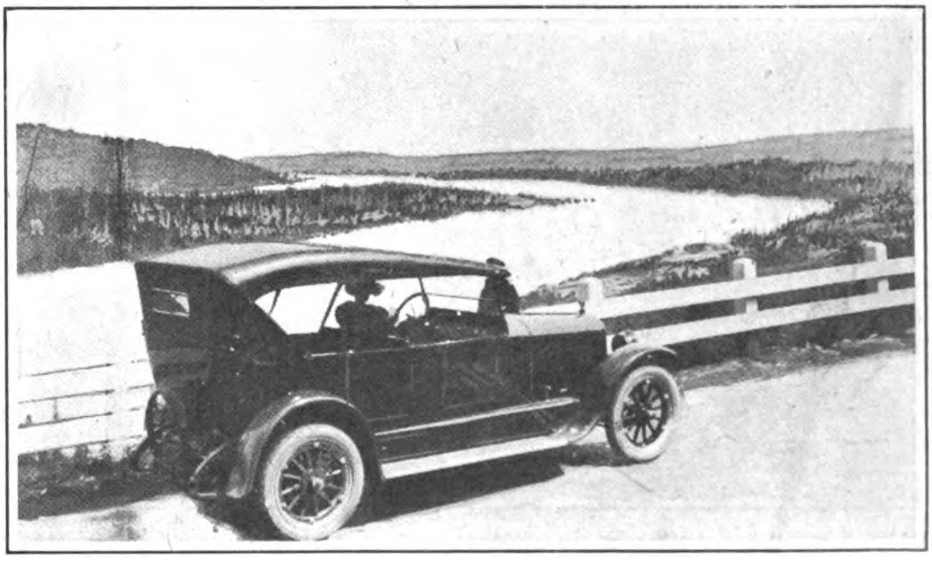
In the San Carlos report, May 1, Ansterberg, not Olson, should have been named as Sarles' mechanician; and a Frontenac, not Duesenberg, as De Paolo's car. In the Fresno race notes in the same issue, one saying Murphy averaged 110.96 miles per hour in a 250 mile race at San Carlos, December 11, 1921, was incorrect, due to carelessly repeating what had been announced when that race was run. The correct average, 109.58, was stated on another page in Motor West, May 1.

Colorado has the highest yacht anchorage in the world, at Grand Lake, at an altitude of 8369 feet, where a regatta is held every summer for a Lipton cup.



COLUMBIA RIVER HIGHWAY, OREGON—VIEW OF THE RIVER FROM CLATSOP CREST.

OPEN ROAD WEEKS OPEN THE SEASON

Touring Lure Put Strongly, Especially by Splendid Entertainments in the Two Chief Coast Cities.

In this day of motion pictures and radiophony, distance equals naught. One may travel as far, or as quickly, with the eye and ear in Swampscott, Mass., as in any other spot. From any points, all points are available, and so no doubt the entertainments given during Open Road weeks in the East, in which, very likely, views of scenes in the Pacific region were thrown upon the cinema screen, were as good as those shown in the Pacific region itself.

Yet there had to be this difference: The crowds which flocked to the entertainments so amply provided by automotive trade men on the Coast were seeing their very own scenery and outdoor life, with which most of them were familiar through personal contact; the pictures merely serving to concentrate, intensify and make more alluring the call of the open road.

On the Coast, entertainment naturally was most profuse in San Francisco and Los Angeles. The Bay City had its fling in the week beginning Monday, April 24, and ending Saturday night, April 29. That has been told about. Los Angeles had its week May 1-6, inclusive, and every person concerned in it, by no means omitting the large number of managers and salesmen who were on duty every day and every night till 11 o'clock, will remember it as s-o-m-e week.

One striking example, undoubtedly expensive and showing how an indoor demonstration of outdoor life will draw a crowd, was that of Howard Automobile Co., 1323 South Flower St. The entrance was no place for a fat man to be at 8:30 p. m. on Wednesday, when a Motor West man tried to drop in and, though of a lath-like style of pulchritude, failed to even squeeze in till 9 p. m., when the evening's second performance began. Judging by the attendance, several thousand persons must have made up the week's total.

Each day "Outdoor" Franklin, one of the country's few trout-fly makers, and who last year motored more than 40,000 miles in Southern California, and who heads the company's outdoor information bureau, gave fly-making demonstrations and exuded pleasing vacation information. Each day, also, a radio concert was given.

The evening program of Wednesday, practically like those of other evenings, comprised an excellent Mack Sennett (Turpin) comedy film; a trout talk by Mr. Franklin, illustrated by film pictures of motoring to, and camping and fishing in, the wonderful Sespe River region; startling film stories of Buick sturdiness and man's ingenuity in the High Sierra snows; and of the Buick carburetor's disregard for the handicap of a motor well "salted down" with snow on Columbia River Highway; also of Buick steering excellences, in a push-ball contest. One pretty woman sang, and 15 pretty women, more or less—some decidedly less—garbed in sporting, outing and beach togs, added to the lure.

The Buick band supplied excellent music. Real scenic and rustic art there was, in the mural embellishments, the various lighting effects giving the stage background, a mountainous vista, peculiar charm.

In the first two nights Howard Automobile Co. counted 2000 visitors to its Pinehaven Camp.

J. W. Leavitt & Co. estimated the stream of visitors drawn to their sales room by Camp Leavitt as numbering 11,000. There were also on hand a high priced motorboat, far from its native habitat; an active radiophone, and the new Columbia Six models.

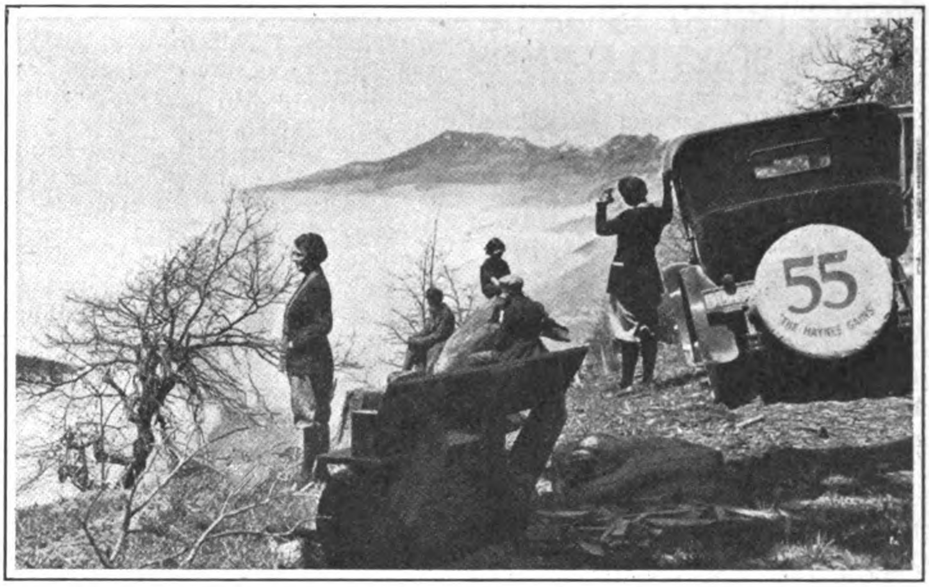
The radiophone was utilized by a surprisingly large number of dealers as a feature in their exhibits—probably about 25 per cent of them. Paul G. Hoffman, Inc., gave radio concerts, moving pictures, and had a campfire quartette perform nightly. J. V. Baldwin Motor Co. had radio entertainment also, while close at hand the company's service men created a complete Chevrolet model from a pile of neatly arranged parts, and drove it off the sales floor. White Auto Co. had radio, and a Stephens car carrying a special custom-built camping body of modified truck design, with ample space for carrying stoves, tents, buckets, shovels, tables, bedding, and cooking equipment.

The W. P. Herbert Co. lure was an orchestra, and oriental dancing all through the week. Reo Motor Car Co. of California kept a radio-equipped Reo sedan moving around town, while the five-piece Ambassador Hotel orchestra performed at its sales room. Paige Co. of Southern California showed old Mission San Juan Capistrano as it existed 125 years ago, and set it off with paintings, hangings, and statues valued at several score thousands of dollars.

Harold L. Arnold, Inc., displayed an old English cottage of the Elizabethan days, and made it harmonize with the ancient Egyptian motif of its sales room. An exact miniature of Flintridge Country Club, near Los Angeles, was installed by William E. Bush, Inc., and Mission Motor Co., surrounded several Dort models with a picturization of the ruddy walls of Red Rock Canyon.

Beyond any doubt business, that is, the sales of passenger cars, was stimulated, although the week was staged to appeal especially to retail buyers. The springtime touring and sporting spirit was intensified, crowds were drawn and held afternoons and nights,

CAMPING ON LAKE ARROWHEAD, AWAITING THE OPENING OF THE TROUT SEASON.
Trout season opened May 1. These folks were waiting for it, encamped on the shore of Lake Arrowhead, a mile high in the San Bernardino Mountains of Southern California. There are thousands of such spots in the Pacific region; spots where the days are gloriously bright, as a rule, and the nights, even in summer, refrigeratingly delightful.



ONE OF THOUSANDS OF PARTIES THAT HEARD THE CALL OF THE OPEN ROAD. The picture was taken about 16 miles from San Bernardino, Calif., at an elevation of 5100 feet, on the way to what was Little Bear Lake and now is Lake Arrowhead. To anyone who knows the joy of being in the upper regions of pure, dry air, of temperature perhaps several degrees lower than at lower altitudes, but practically warmer because dry, and of gazing out over the limitless miles of a sea of cloud or high fog, this picture must be an urge to answer the call of the open road

and out of these enterprising salesmen have induced an amount of names onto order blanks, and into prospect lists, that will aid powerfully in counteracting the quieting effects of summer weather on active demand.

Apparently San Francisco's Open Road Week, more than in Los Angeles, was made the time for bringing out-of-town dealers to distributors' headquarters, and the impression brought from all parts of Northern California and Nevada was one of optimism. The Bay City probably had the most elaborate single display on the Coast, this being the combined camping and touring equipment show to which Don Lee gave two floors of his large Van Ness Ave. building.

The Open Road Week enterprise as a whole unquestionably has proved itself a desirable and profitable annual fixture.

A Boost for Ye Open Road.

A demonstration of the value to Spokane tradesmen of open roads from all tributary districts to Spokane—and this is equally true of the smaller communities—was observed in Spokane during several weeks, recently. On account of the unusual weather, which blocked many roads, a decided difference in the sales of merchandise was noted, compared with times when the roads are freely accessible. Usually, most of the main line roads are open the year around, which has a tendency, according to a leading merchant, to equalize trade throughout the year.

Not only did the merchandising establishments of Spokane and the smaller cities feel the reaction because of blocked roads, but this was equally true of moving picture theaters, enrollment in the night schools, and in every other line which depends more or less on trade from outlying districts.

Northern Cross-Country Travel Begun.

Word from Spokane, May 1: So far as snow is concerned, it is believed the roads are open over the northern route between the Pacific and the Atlantic seaboards. Pipestone Pass over the Rocky Mountains reopened April 25, according to reports received by the Inland Automobile Association, Spokane. This pass, it is believed, was the only obstacle to passage between the oceans. Arrival of tourists from the East is expected to begin soon.

Pipestone Pass is 18 miles east of Butte and several miles west of Whitehall, Mont. Its elevation is nearly 7000 feet.

The Highbridge tourist camp at Spokane had not been opened officially, but had been occupied by tourists every night for more than a week, the average number of cars having been five nightly. The water has been turned on and the caretaker has returned. The camp has been connected with the Inland Empire and Sunset Highways.

An Odd Couple of Spring Days.

Monday, May 8, the Los Angeles region had rain and wind. San Francisco had a strong, cold blow. Central California got some frost, as did parts of the Pacific Northwest.

On May 9, Tuesday, Los Angeles saw a beautiful sight—Mt. Wilson, a few miles north and a mile high, glitteringly white in the sunlight that followed the rain that ended about midday. That day, snow covered all high altitudes as far as Colorado, a foot deep in sections. In the plains of the Middle West it rained. In Chicago a man died of the heat. Buffalo was cooler than Seattle, Portland, San Francisco or Los Angeles. New York, Boston and Washington were hot.

May 10 was a balmy day in Southern California, as all days probably will be, with refrigeratingly delightful nights, till late in the year. On May 10, however, a visitor to Motor West had a red, storm-blasted countenance. He had driven continuously from Fresno and struck the snow on the high Ridge Route.

Many Tourist Inquiries in Spokane.

The motorist information bureau conducted by the Inland Automobile Association at Spokane is receiving many more inquiries about road conditions than ever before at this time of the year. This was true even during the winter. In one day, early in April, the office had 60 inquiries over the desk, to say nothing of telephonic inquiries, during the 3 hour morning period. The number of desk inquiries are averaging about 30 a day, and telephonic inquiries about 15 a day. Letters of inquiry from distant points indicate a large tourist traffic during the summer.

Lincoln Highway Open June 1.

Lincoln Highway over the Sierras is being sanded and will be open to automobile traffic by June 1, it is expected. The proposed river route of the state highway from Truckee east to Verdi is free of snow already, but the Dog Valley grade, preferred by California state highway commission because of the alleged much cheaper road construction costs, was reported recently as still badly blocked. Automobiles appeared again on Truckee's streets the last week of April, after four months of locomotion exclusively by sleighs and wagons.

Touring in Safety Stage Coach.

F. R. Fageol, of Fageol Motors Corp., Oakland, Calif., and Adolph Schleicher, president of Samson Tire & Rubber Co., Compton, Calif., near Los Angeles, are touring the Pacific Northwest in the luxurious, low-hung Fageol intercity safety stage coach, which has been a familiar sight in Southern California recently.

Summer almost here, and yet, from Motor West's windows, brilliant white mountain tops glisten in the sun.

California has more motor vehicles than 11 of the Southern states combined.

LONG DEPRESSION IN SEATTLE ENDS

All Business Better and Established Automobile Lines Are Having Much Larger Volume of Sales.

Three years of business depression in Seattle have come to a close, and every line of business shows a near approach to the activities seen on every hand in 1918, when the city felt the influence of lavish Government expenditures for shipbuilding and navy and army supplies.

Well established, well advertised lines are bringing distributors a most enjoyable volume of sales, especially in the past 60 days. H. P. Grant, of Seattle Automobile Sales Co., handling Haynes and Chandler cars, reports his entire allotments so depleted as to necessitate war-time pressure on the fast-working Eastern factories to obtain cars enough to fill orders.

Sands Motor Co. states it sold more Studebaker cars in March than in any previous Studebaker sales month in Seattle. In April it handled a further increase of 70 per cent. The company has opened in a new and larger building, 1016-18 East Pike St.

Samson trucks and tractors will be distributed in the Seattle territory by Vernon A. Smith, 511-13 East Pike St., who concentrated previously on the Day-Elder truck.

Apperson Brothers Automobile Co., Kokomo, Ind., has announced that J. O. Gates, 1159 Broadway, has been made service agent for Apperson cars, for which a distributor in Seattle is lacking temporarily.

In the Seattle tire trade an important event was the appointment of E. P. Strang as branch manager for Spreckels "Savage" Tire Co., succeeding John J. Clark, resigned. He went direct from the San Diego factory, and before that was with Firestone at Akron several years.

R. L. Page, 809 East Pike St., has taken distribution of Hydro-Toron tires in Seattle.

Adolph Schleicher, president of Samson Tire & Rubber Co., Compton, Calif., a highly successful tire factory—said to be the first cord tire plant on the Coast—was a visitor in Seattle, studying the distributing field.

At a meeting of county presidents and executive committeemen of the Washington Automotive Trade Association, tentative plans were laid for the state convention at Olympia, July 21-22. Six men were selected to head the six crafts composing the association—tire dealers, battery dealers, repair and garage men, accessory men, body, top, and paint shop men, and motor car dealers.

Hope for Willys Plant Site.

Richmond, Calif., situated on San Francisco Bay, north of Oakland, has hopes of securing the Pacific Coast assembling plant of Willys-Overland.

MOTORIZED FARMING IN A CALIFORNIA COUNTY RICH IN PEACHES.

They used to say Delaware peaches were the "only" ones. For Michigan peaches, similar claims have been made. The fact is, as fine peaches as you ever ate are raised in many parts of the Pacific region. The picture shows a Cletrac wending its useful way through an orchard in Placer County, Calif., north and east of Sacramento. In 1921 this one county shipped 1,076,954 packages of peaches alone. In addition, 4046 tons—not packages—were sent to the canneries.

Trying "Magic Circle."

At Western Ave and Wilshire Boulevard, Los Angeles is trying the "magic circle" idea for lessening danger at intersections where there are car tracks. The city engineer originated it. The concrete circle, 40 feet in diameter, cost less than $100. It compels motorists approaching the intersection to slow up, fall in line and move around to where they want to leave the intersection. Similar circles, roped instead of concreted at present, are being tried at other points. The idea has handled as many as 5000 vehicles an hour.

New Cord in Goodyear Line.

Goodyear sales and distribution plans for spring and summer were discussed at a recent meeting of salesmen at the Los Angeles factory of Goodyear Tire & Rubber Co., Los Angeles. No change is being made in May price schedules, but a new tire, the Goodyear cross-rib cord, will be added to the line soon. Business is increasing satisfactorily, and production is well ahead of last year at both the Los Angeles and Akron plants, and 80 per cent of the 1920 peak operations.

L. A. May Buy Fleet of 207 Trucks.

Small news item, but what an order! Los Angeles city fathers are considering buying, on two or three-year time, 51 5-ton trucks, 80 2½-ton trucks, 16 dump trucks and 60 Ford trucks, and in the time stated owning a fleet the rental of which, in the coming fiscal year alone, would amount to $212,628. The proposed purchase would total considerably more than $500,000.

Truck Owners Want to Help.

The new Truck Owners' Association of Southern California will open its commodious club rooms at 515 South San Pedro St. about May 20, for business and social functions. The body has been formed, it is stated, to help movements for better roads and sensible use of them. Phil Jacobson, secretary-manager, has offices in the Washington Building.

Oregon Registers Over 100,000.

By the end of April automobile registrations in Oregon totaled 100,057, exceeding the first four months of last year about 4500.

At the end of April, motor vehicle license receipts were $1,698,723, compared with $2.334,931 for all of 1921.

There comes a time when the only cure for a car badly bothered with obsolescence is a new car.

PORTLAND AGAIN BACK TO NORMAL

March Sales Good and April on a Par With Best Months in 1920—Buyers Prefer Established Lines.

Portland automobile dealers have waved a farewell to Old Man Despondency and now are safely back in the region referred to fondly as Normalcy. April was one of the best months ever; on a par with the best periods in 1920. Increases of 100 to 300 per cent are reported, compared with a year ago.

March was a very good month, but April gratifyingly better as to lower priced cars particularly. Most demand is for the established lines.

Charles C. Fagan Co., Pierce-Arrow and Wills Sainte Claire distributor for Oregon and a portion of Eastern Washington, has been reorganized and capitalization increased from $25,000 to $100,000. The change was made so that Walter L. McDougal, formerly a banker and business man of Buffalo, N. Y., recently moved to Portland, could be taken into the company, and for additional working capital to take care of increasing business. Under the new arrangement C. C. Fagan continues as president, Mr. McDougal will be vice president and treasurer. The two have been close friends for years.

Pacific Motor Co., Durant distributor for Oregon, the newest automobile concern in Portland, is now well located in its new home at Broadway and Flanders St., and Cook & Gill, Paige distributors, which had occupied the Broadway location, now are in their commodious new home at Ninth and Burnside Sts. Pacific Motor Company is occupying its quarters jointly with Durant Motor Company of California's factory branch.

The new Lexington car, series 22, has made its bow at the quarters of Oregon-Lexington Co., Oregon state distributor.

Rubber Products Co., Kelly-Springfield tire distributor for Portland and vicinity, has increased its capital stock from $5000 to $10,000. No change in personnel, the following officials continuing: L. G. Richardson, president; J. A. Leatherman, vice president and manager; P. McCay, secretary and treasurer.

Oregon distribution of the Arrolite signal, a California device, used as a tail light, and as a left, right and stop indicator, has been taken by Castleman & Douglass.

Leavens & Howard, 331 Couch St., one of the best known tire firms in Portland, have taken over the distribution of Federal tires there from Weaver Tire Co., one of the oldest tire concerns in Portland, which is discontinuing its tire business.

Del Wright, one of the most popular Ford men of Portland and for several years manager of the Portland branch of the William L. Hughson Co., has taken over the Universal Car Exchange and will operate it as a private business, handling second hand Ford cars. Mr. Wright left the Hughson Co. last fall and became manager of the exchange, which for some months had been running as a co-operative second hand Ford sales organization, under the direction of the authorized Ford dealers of Portland. Recently the dealers decided to abandon the co-operative plan and Mr. Wright immediately bought out the concern. For several years he was a director of the Automobile Dealers' Association, and when he entered the used car field, thereby disqualifying himself for membership, he was elected an honorary member, being the only member of such character in the Portland dealers' body.

GRATIFYING.

Unemployment returns are gratifying. Agriculture and other basic industries are employing many more workers, and in some lines "help wanted" signs are again seen. The automobile industry alone has taken on probably 50,000 additional workers in the last two months.

The Government reports favorable crop weather in most sections, although floods have done considerable damage in the Mississippi Valley.

Cheerful news has been coming concerning the following: Steel orders, grain exports, steel prices, oil production, railroad earnings, oil prices, car loadings, tobacco industry, building activity, wool, automobile sales, copper, lumber demand, commercial features, rubber industry, silver prices, railway equipment, chemical industry, stone, clay, glass, print cloths, farm machinery, index numbers, electrical industry, hides, mail order sales, raw silk, security markets.—B. C. Forbes in Hearst papers.

Fewer Stolen Cars to Mexico.

Due to extraordinary precautions on the border, sending stolen cars into Mexico is said to have almost ceased; and in most cases where they do go there, satisfactory arrangements have caused their return. At the Canadian line it is said to be wofully "different, again."

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

Book Learning and Billy Chu.

The father of Billy Chu was a Chinese, but Billy was born in California and is as full fledged an American citizen technically, and in ideals, as any other person in this country. Billy is now in charge of service for F. H. Dailey Motor Co., Oakland, which handles Chalmers and Maxwell cars. He is an inveterate student, which helped put him where he is, in fact it is said he knows much more about the theoretical end of motor vehicle design and upkeep than the average automotive mechanic. Back in 1918, before the war ended, he was wiping off cars and acting as a handy man in the shop of Lou H. Rose Co., Oakland. He studied at night, buying all sorts of motor publications, circulars and pamphlets, and by working with his hands in the day became a good mechanic. When F. H. Dailey bought the Rose branch, Chu received his present elevation.

Good Hewitt Tire Contracts.

The J. B. Wood Tire & Rubber Co., Los Angeles, Southern distributor for Hewitt tires, has completed a contract with the Crown Stage Co., at Santa Ana, for the exclusive use of Hewitt tires on its 47 stages.

Royal Service Corp. of Santa Ana has likewise taken on the exclusive distribution of Hewitt tires in Orange County. This company is well organized to give the very best of service that goes with the proper distribution of automobile tires. Hewitt tires have been able to establish a high mileage record on the Crown stages.

Spokane Trade Notes.

The much discussed Jewett car, announced by Paige-Detroit Motor Car Co. as a quality six at a quantity price, has arrived in Spokane, and is on exhibition in the Paige sales rooms, of which J. L. Elam is manager.

The March-Strickle Co. has received its carload of the Durant Six.

A carload of Lincoln cars has been received by R. M. Wade & Co., Ford and Lincoln dealers.

Maintaining Mission Bell Signs.

The action of the California State Automobile Association in taking over the task of replacing and maintaining the Mission Bell signs along El Camino Real in Northern California is being heartily commended.

Denver's Camp Grounds.

Overland Park camp grounds, in Denver, had a tent city last year that housed 39,854 automobile tourists of the United States, Canada, Mexico and the Hawaiian Islands.

BAY CITY MEN TO BE SHRINER HOSTS

San Francisco Dealers Plan a 25 Mile Tour of City and Environs, and Use of Many Cars Is Offered.

Members of the Motor Car Dealers' Association of San Francisco will be prominent in extending the warmest possible welcome and maximum of assistance to the thousands of visitors who will be there in June at the Shriners' convention. Already an automobile committee, headed by William L. Hughson, is working energetically on plans for a 25 mile Shriners' tour of San Francisco and its scenic environs. Hundreds of car owners have offered the use of their cars.

Fred J. Linz, former distributor of the National car for several years, has resumed his agency, with a sales room opened on Post St., a block from Van Ness Ave.

Pioneer Motor Co., direct factory branch for Peerless Motor Car Co., Detroit, and with A. K. MacLuney as manager, has moved to permanent quarters at 1900 Van Ness Ave.

Charles H. Kaar Co., as part of the extension of its direct sales territory on Lexington and Rickenbacker cars, has bought the business of I. H. Glenn Co., Bakersfield, from I. H. Glenn, former partner of Mr. Kaar, for $75,000. Special attention will be given to Kern County henceforth for sales of the Rickenbacker car.

The new Columbia car and Liberty car models; Stanley 4 door coupe; Auburn sport car; and Kissel De Luxe models have reached San Francisco distributors' sales rooms recently. Fully 10,000 persons viewed the new Columbias displayed by J. W. Leavitt & Co., state distributors, and carloads are being hurried to California to supply all Leavitt branches with a much larger allotment than was planned originally.

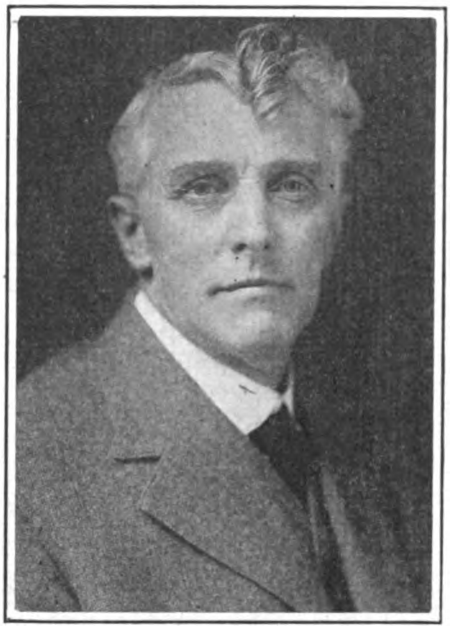
While in Detroit recently, seeking an increased allotment of Cadillac cars and attending a dealers' conference, Don Lee wired his San Francisco branch that shipments to California will continue at the rate of 200 a month. During April 219 new cars were delivered in the Lee territory, showing 123 per cent increase over the same month of 1921.

H. O. Harrison Co. sold 113 used cars in January, 105 in February, 105 in March, 157 in April—a total of 480 in four months, apart from its new Hudson and Essex sales.

White truck sales in April, according to G. A. Urquhart, Pacific Coast manager for White Co., Cleveland, were better than in any month since August, 1920, and were the fifth largest in the Coast organization's history. Initial and additional orders from large Coast concerns are increasing—Union Oil Co. of California, for example, expanding its White fleet from 534 in January to 604 in April.

Chester N. Weaver, head of Chester N. Weaver Co., Studebaker distributor, recenty has been convalescing from a severe siege of pneumonia, lasting several weeks. Coming to the Coast as San Francisco manager for the old Studebaker wagon factory, he has been identified with that name more than 25 years.

W. D. Wallace has been named district representative for Auburn Automobile Co., Auburn, Ind., in the territory covered by H. A. Seller-Cummings Co., and will have his headquarters with Seller-Cummings.



J. ELMER PRATT.

Mr. Pratt, pioneer in both production and sales of automobiles, now raising avocadoes and other fruits in the beautiful Cajon Valley, near San Diego, occasionally writes valuable views on matters deeply affecting the industry.

J. L. Kenyon, with many years of Detroit factory experience, and several years in the wholesale end for California distributors, has joined Liberty Motor Car Co., San Francisco, distributor of Liberty cars, as field man, James P. Scearce, general manager, announces.

Correction.

In the May 1 issue, in naming members of Pacific Motor Co., Portland, new Durant distributor in that field, the initials S. C. were inflicted upon Edward J. Cooke, who is manager of the company.

New Coast Car Records.

An H. C. S. car, driven by C. F. Crank, an amateur driver, traveled 141.5 miles recently over a roundabout route from Los Angeles to San Diego, using 3½ gallons of gasoline, an average of 40.3 miles to the gallon, Walter M. Brown Co., Los Angeles distributor, has announced.

Mrs. Z. Kathleen Ayers is president of the California Federation of Business and Professional Women's Clubs reception committee for the June convention, to be held in San Francisco. To personally invite the women of the Pacific Northwest to attend she drove a Buick 4 cylinder coupe last week from San Francisco to Portland, 725 miles, in 22 hours, 43 minutes, official Western Union time—said to be 3 hours, 8 minutes, better than the previous record, and nearly 6 hours faster than the Shasta Limited, the Southern Pacific's crack train between the two cities. Mrs. Ayers was accompanied by Claude McGee, of the Howard Automobile Co., San Francisco, maker of several Buick records himself, but who relieved Mrs. Ayers at the wheel only occasionally.

On the same day Fred Gross of the Howard organization drove a Buick 4 cylinder touring car from San Francisco to Camp Curry, where it was awarded the Camp Curry trophy as being the first car into the Yosemite, under its own power and over an authorized automobile highway in 1922.

When news of the recent Downey explosion reached San Francisco, a newspaper asked R. C. Durant, head of Durant Motor Co. of California, for use of an airplane to fly to Los Angeles and return with "pictures." However, it was decided that a Durant 6 cylinder car, taken from the stock of Earle C. Anthony, Los Angeles, could beat the round trip time of an airplane. The "pictures" were brought to Oakland in 10 hours, and sent to San Francisco by Durant's fast motor boat, Black Swan.

Parts Firm Trebles Capital.

Suggestive of the rapid growth of the parts replacement business on the Coast comes announcement by Patterson Parts, Inc., Oakland, that its capital is being trebled, from $75,000 to $225,000. The original capital, according to W. D. Patterson, manager, was paid up long ago, and a large portion of the new capital already is subscribed for. The company started in Oakland, but now has busy branches at San Francisco, Sacramento and Portland.

Gone—hard times. But be thrifty.

ANGELENOS HEAR OPEN ROAD CALL

Displays Staged By Dealers Disperse Indisposition to Buy — It's Bright and Warm Now, All's Well.

Automobile buying, like many other retail activities, is peculiarly sensitive to weather conditions, and nowhere is this more noticeable than in Southern California. Dealers in Los Angeles, in staging the recent Call of the Open Road Week, found that by doing so they were counteracting the effects of quite a number of cloudy days, during which the city's celebrated sunshine was had only in much diluted quantity. Finally, early last week, rain capped the climax; but days are bright again, and warm; and the public easily gets into a buying frame of mind.

The one remaining important event of the before-summer season is the annual dealers' economy jaunt to Camp Curry, in Yosemite National Park, postponed to occur May 19-20, and for which 17 stock cars have been entered.

Three new Los Angeles agencies lately announced are for dealers with territory restricted to the local, city sales field. Bozzani Motor Car Co., Broadway and Sunset Boulevard, and Kaiser & Shortell, Central Ave. and 24th St., have joined the list of authorized Durant car distributors. F. J. Riley, 961 South Olive St., has been appointed associate dealer for Jewett cars by Paige Co. of Southern California.

Bridge-Bullock, Inc., 1402 South Figueroa St., have been made a city retail agency for Overland and Willys-Knight cars. The concern is composed of G. Donald Bridge and C. J. Bullock.

Prominent among new models received from the factories are the Cole Ultra sportster, Duesenberg sedan, and Columbia Six types.

Don Lee, Cadillac distributor, announces that in the inter-organization sales contest between his Los Angeles and San Francisco branches, the Southlanders won by the margin of one sale, in April, showing 110 cars sold from Los Angeles, and 109 from San Francisco. In March San Francisco led by three sales. April was a record month for Don Lee and 123 per cent better than April of last year. From October 1 last year up to May 1 Lee has delivered 1318 of the new model 61 Cadillac line.

Howard Automobile Co. sold 527 Buick cars in April in Southern California and 127 cars in the first six working days of May.

Albertson Motor Co., Dodge Brothers distributor, reports that February, March, and April made up the busiest quarter-year in its history, surpassing the same period of 1921 by 300 per cent.

Walter M. Brown Co., H. C. S. car distributor, has appointed E. L. Webster sales manager. He was with the Packard sales force of Earle C. Anthony, Inc., three years.

Gordon Buckner, former sales manager for Smith Brothers, has become sales manager for Lord Motor Car Co., Jordan and Velie distributor.

Two instances of why Eastern motor truck factories are enjoying a wonderful revival in business is given by Los Angeles truck concerns. White Auto Co., White truck distributor, summarizing its 1922 business to a recent date, finds that it sold 10 trucks a day, on an average, during 17 successive weeks, or a total of 1020 trucks in 102 working days, and representing a total value of $680,000.

Service Truck Sales Co., factory branch headed by Fred G. Whipple, states that three carloads of Service trucks have been received recently, and that five more carloads will arrive during May, all of which already have been sold. The Los Angeles branch has placed 250 Service trucks in operation in Southern California.

PARADISE REGAINED.

The world was dark and gloomy as
he motored down the street,
He'd lost his friends; he had no
home; his plans had met defeat.
One tire was flat and punctured and
the engine missed on three,
His countenance was blacker than
the mem'ry of a spree.
Yet when he pulled into the curb
joy lighted up his face,
And life seemed very sweet again—
he'd found a parking place.
—Los Angeles Evening Express.

Commercial Motor Co., A. E. Neff, manager, reports it has sold more Republic trucks in the past 90 days than in two years previous. The first 1922 models were received recently, and shipments to the Coast will be increased materially, soon.

At the recent annual meeting of the Motor Car Dealers' Association of Los Angeles, Paul G. Hoffman, Studebaker distributor, was elected president; Harry A. Lord, Velie distributor, vice president; Benjamin A. Finch, Ford dealer, secretary; Ralph Hamlin, Franklin distributor, treasurer; and P. H. Greer, Chalmers and Hupmobile distributor, and Fred S. Albertson, Dodge Brothers distributor, both directors. Mr. Albertson has been president the last two years. The association now has 61 members.

Overhaul your petrol wagon yet?

L. A.-Camp Curry Run Postponed.

May 12-13 had been set for the economy run from Los Angeles to Camp Curry in Yosemite Park. On May 10 the park superintendent said Wawona Road would not be open till May 15. Due to the storm, the run will be on May 19-20. The contestants will find deep snowbanks alongside of, if not on, Wawona Road, and the park head says motorists may expect "minor difficulties." They did that same on last year's run—biting snow on the Ridge Route, and between Merced and the park they went through a sea of slush and gum. This year they will strike away from San Joaquin Valley at Fresno, with what better luck remains to be seen.

So far this year, only four cars have entered Yosemite Valley. The only one from Southern California got there just before the latest snow storm on May 9.

East Bay Branch Is Active.

Opened last January, the Oakland branch of the California motor vehicle department now is the third largest in the state. Up to May 1 it handled registrations of 71,908 persons. On that date there were 47,250 cars, 2360 motor trucks, and 90 trailers registered in Oakland alone, although the branch's eight employes handle business from all points in Alameda, Contra Costa and Santa Clara Counties.

Campaign to Reduce Accidents.

Northern California newspapers of yesterday, May 14, doubtless gave much space to an article released by the California State Automobile Association for that day, and containing in brief those sections of the state motor vehicle law that, if obeyed, will do much to reduce accidents. Though briefed, the information would fill 2½ pages of Motor West.

Good Sales at Mexican Show.

Both in attendance and sales of cars and accessories, the show held in the splendid National Theater Building in Mexico City, opening April 16 and closing April 23, was a decided success. Sales are said to have included 142 passenger cars, 5 trucks and 10 tractors, and accessories and equipment worth 800,000 pesos or $400,000.

2000 Automobile Rail Cars.

The Southern Pacific Railroad Co. has placed an order for 2000 automobile freight cars for 1922 delivery, according to recent report. They will be of the single-sheathed, staggered side door type, with folding door ends.

Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

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MAY 15, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

A Little Tale of Two Cities

SAN FRANCISCO and Los Angeles are nearly 500 miles apart. Motor West, published in Los Angeles, has a San Francisco office, but matter addressed to it for publication, if sent to the Bay City instead of to headquarters, necessarily is delayed at least 24 hours, which may mean a delay of half a month in publication, as Motor West issues on the first and fifteenth day of each month. Will friends 'way back East kindly note?

Co-operative Effort Gets There

SOME TIME AGO, in Motor West, co-operative mechanical standardization was urged by J. Elmer Pratt, a veteran production and sales manager, whose retirement to a California avocado ranch does not prevent him from putting many clear, valuable thoughts on paper.

Pratt believes that mechanical co-operation alone would keep many factories at capacity production many years, and junk many millions of cars now in use. Quite likely. Many cars are in use not because they are giving superlative service, but because it has not seemed profitable to their users to buy new cars. New car prices are down now; purchases are increasing; but they would have increased much sooner were co-operative mechanical and merchandising service farther advanced.

The change is well on its way, fortunately. A number of manufacturers, not of cars but of units and parts, are co-operating in countrywide, even international, distributive and other service. Members of the Society of Automotive Engineers swap information more and more. The service idea is being urged upon dealers by their national organization, and by many state organizations, of which the one in California was the pioneer.

When the thought of standardized, co-operative effort is put into much more comprehensive action, and the public is shown, largely by rightly placed regional advertising, what is being offered to it, it will respond. The work of individual salesmen will be much easier.

Lack of comprehensively standardized selling effort, consisting of good mechanical and other service and advertising it educatively, has given certain manufacturers who have used such methods individually a much larger proportion of available business than they would have had otherwise. Some of them have used John Wanamaker's knowledge that it pays to advertise what is offered when business is good and even more when business is bad. One maker, Ford, always has found it pays to give much for relatively little, and the fact has been his chief advertisement because he has been permitted to be alone in enjoying that method.

The advantage of the few, which has been the disadvantage of their competitors and of the public as a whole, can be and some day will be reduced when those competitors act co-operatively.

When Squirreling Does No Good

PREHISTORIC instincts are strong in us all. Sometimes we obey the instinct of caution too quickly. It is all right, when a cyclone is buzzing around, to scuttle into a hole and pull the hole in after one, but all wrong to stay there, or to go there at all, if what is buzzing can be scared away or defeated; and co-operative action does this best. Yet, in business, instead of sticking together, members of trade associations are prone to withdraw at the first sign of hard times, obviously to their own detriment; and another thing many of them do is to curtail or stop advertising.

Just now, not only is constructive co-operation important, but protective co-operation is vitally so. There is much legislation pending which should be combated. If there were no other reason for those who have dropped out of business associations getting back in quickly, that one should suffice for any man who thinks. The same is true as to co-operating with publishers who, with or without encouragement, are always on the job.

A Detroit Item Worth Noting

ONE of a group of commercial briefs concerning various parts of the country, early in May, was from Detroit. It spoke of the "unprecedented revival" of automobile manufacturing; of demand for closed cars being especially persistent, apparently likely to continue throughout next winter, and very likely—as it takes 60 to 90 days to put a closed car body through the factory—to cause a shortage by July 1. Parts makers are oversold and becoming more so; higher car prices may result from higher costs of steel and labor; unskilled labor demand exceeds supply; the surplus of unskilled workers has decreased; and so on. Very good. Then followed this:

"Retail business here has not kept pace with manufacturing. People seem to be putting their money in homes and other investments."

Note that paragraph. It is true not only of Detroit but of the whole country. Only shortsighted persons who want to sell what they have to sell, regardless of other considerations, will disagree as to this being one of the healthiest indications possible.

The nation in many respects is passing into a new era, and a feature of the change is thrift. The spendthrift times have passed, for the great majority. Wild spending there has been and will be, continuously by some, in periods by many—but as a nation we are learning at last that thrift is wise, and that if practiced it will give us all, including automotive merchants of course, more steady prosperity.

Fingerprints Versus Car Thefts

DESPITE laws and locks and all other devices, ye automobile thief continues to revel in prosperity. Some day an effective preventive may be in vogue, something of national uniformity. Meantime, and in that connection, there is mentioned here a suggestion urged quite a bit of time ago by the superintendent of California's state bureau of criminal identification—fingerprint proof of ownership. He said the device is used sometimes in business—why not in motor registration? He said that if, in addition to his signature, a registering motorist were to record the impress of one of his digits, it would be made practically impossible for a thief, if required to submit proof, to forge both signature and fingerprint successfully.

Thieves have ways of obtaining stocks of license plates, and this might not overcome that; but it is in line with other ideas. It may have to be mentioned a few hundred times before it is remembered, but may be adopted eventually nevertheless.

Are We Fair to the Women?

POLICE CHIEFS and others differ as to women who drive motor cars. Some say they are erratic and dangerous. Others say they are more trustworthy than men. Though no statement has appeared comparing the percentage of the total number of women drivers who cause traffic trouble with the percentage of men drivers who do that same, perhaps investigation would earn for women the higher rating.

The subject is suggested by a Southern Pacific woman agent's talk before a railway club in Oakland. She said that in many positions the woman employe is more successful because she has more patience and tact. Observation of women motorists will prove to anyone that though their interest in fashions may be stronger than that of men, when at the wheel they attend to the business in hand and look straight ahead. Many a fender is dented, and much worse things happen, because men drivers allow their heads to be turned by skirts.

While you are reading this, dictate a letter to your representatives in Congress, urging repeal of the Adamson law, which has made a preferred laboring class of railway employes and is contributing to high freight rates.—The Leader, American Automotive Equipment Association's official organ.

Each motorist pays $34.67 in various taxes, says some statistician. Most of it is a tax on industry.

Bring people in to buy who now go by.—Hayes Wheel extra profit edition.

Entries for Indianapolis Race

The entry list for the tenth annual 500 mile international sweepstakes race on the 2½ mile brick-paved speedway at Indianapolis, May 30, is as follows:

Car.	Driver.	Entrant.
Disteel Duesenberg	Eddie Hearne	Disteel Flyers, Inc.
Frontenac	Roscoe Sarles	Louis Chevrolet
Frontenac	E. G. "Cannonball" Baker	Louis Chevrolet
Frontenac	Peter DePaolo	Louis Chevrolet
Frontenac	Art Klein	Louis Chevrolet
Frontenac	Ralph Mulford	Louis Chevrolet
Frontenac	Unnamed	Louis Chevrolet
Not Named	Tommy Milton	Tommy Milton
Leach	Frank Elliott	Ira Vail
Frontenac	Unnamed	Mrs. Mae Harvey
Duesenberg	Harry Hartz	Harry Hartz
Ballot	Jules Goux	Jules Goux
Ballot	Not Named	Jules Goux
Peugeot	Howard Wilcox	Howard Wilcox
Duesenberg	Wallace Reid	Wallace Reid
Duesenberg	Ralph DePalma	Ralph DePalma
Fronty-Ford	Jack Curtner	Jack Curtner
Fronty-Ford	C. Glenn Howard	Chevrolet Bros. Co.
Duesenberg	I. P. Fetterman	I. P. Fetterman
Bentley	W. D. Hawkes	W. D. Hawkes
Duesenberg	Jules Ellingboe	Jules Ellingboe
Duesenberg	Jerry Wanderlich	Jerry Wanderlich
Monroe	Wilbur D'Alene	Monroe Motors Co.
Monroe	Tom Alley	Monroe Motors Co.
Monroe	Lora L. Corum	Monroe Motors Co.
D'Wehr	Frank Davidson	Frank Davidson
Duesenberg	Joe Thomas	Joe Thomas
Duesenberg	Unnamed	O. A. Hoffman
Bentz	Wm. H. Gardner	Wm. H. Gardner
Mystery Car	No Name	
Durant	R. C. Durant	R. C. Durant
No Name	James Murphy	James Murphy

Prediction by N. A. D. A. President

President W. J. Brace, of Kansas City, of the National Automobile Dealers' Association, predicts that if business continues without unforeseen difficulty 1922 will see approximately 2,000,000 motor vehicles placed in the hands of owners, as against 1,700,000 last year.

Lem Loosehead says: Seems t' me 's if not so many dealers woulda left the bizness—in th' lurch, y' might say—if their franchises 'd been more like assets than they were.

Calendar of Coming Events

May 19-20—Seventh Annual Los Angeles-to-Camp Curry (Yosemite) Economy Run.

May 30—500 Mile Race, Indianapolis.

June 3—Salem, Ore., State Fair Dirt Track Races, Sanctioned by A. A. A. J. E. Hickey, Manager.

June 15—Annual Convention, National Park to Park Highway Association, Sacramento.

June 19-23—Automotive Equipment Assn. Convention, Colorado Springs, Colo. June 24 also, if necessary.

June 20-24—Summer Meeting, Society of Automotive Engineers, White Sulphur Springs, W. Va.

June 26-27—Annual Meeting Southern Division of California Automobile Trade Assn., Pasadena, Calif.

July 4—Eleventh Annual Automobile Race, Tacoma Speedway.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in Connection with Brazilian Centenary.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Nov. 30.—Thanksgiving Day 250-Mile Los Angeles Speedway Race for $25,000 Purse.

Another New Lexington Car

Five-Passenger Touring Model Listed $240 Lower Than Any Previous Ansted-Motored One

LEXINGTON MOTOR CO., Connersville, Ind., announces a new 5 passenger touring model, "Series 22," at $1745, which is $240 less than the lowest previous price on a Lexington motor car equipped with the Ansted engine, including the Moore multiple exhaust system, which saves fuel and adds power, and is an exclusive Lexington feature patented by John C. Moore, chief engineer. The Ansted engine has been refined and improved in many respects. A new type of 2 ring piston is used, that neither slaps nor pumps oil, and which shows no signs of wear after thousands of miles of use. Perfect vaporization of fuel, regardless of weather conditions, is assured by the use of the Lexi-gasifier. A high grade thermostat controls the water temperature at all times, both in summer heat and in winter cold.

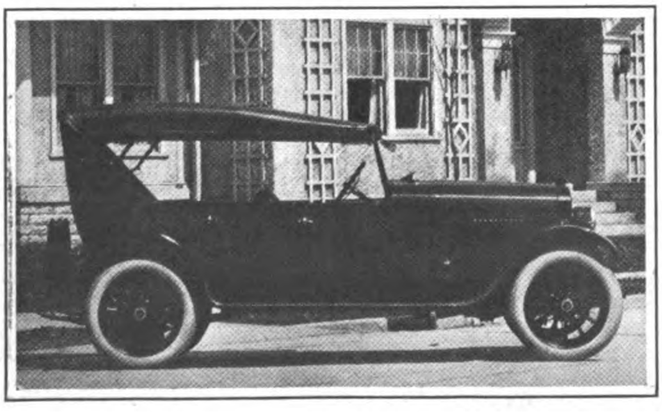
A salient feature of the new Lexington is the frame design. This incorporates the "double triangular center cross member" on which a patent is pending. Furthermore, the side rails have the unusual depth of 7¾ inches. The wide steel running boards are bolted to the side rails, and are removable readily in case of accidental damage. The front and rear cross-members have been strengthened by deepening the gusset plates. The Lexington factory claims this frame construction is superior to anything on the market in sturdiness and stiffness, adding materially to the life of the car.

Riding comfort has been achieved in the new Series 22 Lexington by using front and rear semi-elliptic springs of exceptional length. The front springs are 38 inches long and 2 inches wide, and the rear springs are 59 inches long and 2¼ inches wide. The spring bolts are oversize throughout, having a diameter of ¾ inch everywhere except at the front end of the rear springs, where they are a full inch in diameter. The makers claim the bolts in the front ends of the rear springs are subjected to the most strain and wear on all cars, and have made provision accordingly. Force feed oilers are provided for all spring bolts, and at other friction points throughout the chassis. Boots are laced around all springs at the factory to assure permanent riding ease by keeping the lubricant in and mud and water out.

Other features that have distinguished Lexington cars for many years are continued, such as the equalizing cable foot brake system, the "one-finger" emergency brake system, the adjustable radiator mounting for the new drum-type headlamps, the flexible fabric disc universal joints, and the unit power plant construction with enclosed flywheel.

The body is both beautiful and roomy. The windshield is built solidly into the cowl, instead of sitting astride it, making it possible to fit the storm curtains up snugly. When in use, the storm curtains open with the wide, full-U doors, and when not in use are stored in a convenient locker built into the back of the front seat. Full ventilation is provided by a cowl ventilator and the adjustable upper windshield panel.

Equipment is complete, including 32x4½ inch cord tires. A spare demountable rim is provided on the rear tire carrier, a Lexington feature stated to have been copied widely.



NEW LEXINGTON 5 PASSENGER $1745 TOURING CAR.

Industry Advances In First Quarter

A survey of the automobile industry during the first quarter of 1922, made public May 6 by the Motor and Accessory Manufacturers' Association, indicates marked but steady increases in production and a general betterment in fundamental financial factors.

The upward swing of sales in January, February and March was sharper than the normal seasonal jump for that period of the year. Preliminary figures for April promise a continued increase in purchases by vehicle makers from the parts and unit manufacturers.

M. L. Heminway, general manager, and Sidney S. Meyers, general counsel of the Motor and Accessory Manufacturers' Association, returned recently from a tour of the Middle West. They reported that in general manufacturers are running behind their orders. Many factories are employing two shifts. A great deal of this activity, naturally, is purely seasonal, but the improvement in credit conditions is more fundamental than that.

Nobody is talking of a feverish boom, but almost everybody is face to face with genuinely good and progressively better business. There is enough optimism to justify a note of caution. The industry's experience of two years ago is still a stern schoolmaster. A rigorous liquidation process has left the trade in a sane and virile condition, dynamic enough for sound and steady advances, without being reckless enough for an unbridled and hectic runaway market.

Past due accounts reported by parts and equipment makers decreased more than 8 per cent in February and approximately 28 per cent in March. Equally encouraging was a 23 per cent drop of notes outstanding in March.

Quarter Shows 65 Per Cent Gain

Sales have shown a 65 per cent gain over the first three months of last year, according to Alfred Reeves, general manager of the National Automobile Chamber of Commerce, who recently completed a tour of investigation. The first quarter totaled over 300,000 production of cars and trucks. Mr. Reeves says indications are that the second quarter will exceed 300,000, and April gains would indicate that. The chamber had wire reports from 40 different sections indicating that sales were on the up trend and that truck sales had shown splendid gains. Judging by the reports as compared to last year, the makers' association believes that 1922 will show a substantial gain over 1921 in production. In 1921 there were made 1,700,000 motor vehicles, mostly passenger cars. The total automotive production value, $1,887,148,000, covered also car equipment and parts—pretty fair for a time of business stress. It shows the strength of a great industry.

Words Reflecting the Situation

Guaranty Trust Co. of New York says recent developments indicate industrial progress toward complete recovery may continue, although it may be blocked seriously if the coal strike be prolonged greatly. It says that there is warranted only a conservatively confident outlook, rather than expectation of a boom.

Receivers for Stevens-Duryea

In response to a bill in equity filed by Fisk Tire Co., receivers were appointed in Springfield, Mass., May 9, for Stevens-Duryea, Inc. The bill alleged the company owes $1,100,000 and finds difficulty in converting its $4,124,471.64 of assets into cash.

English traffic keeps to left, pedestrians to right.

Wanted!—

We want live jobbers on the entire Western Coast to distribute

LIBERTY AIR COMPRESSORS

Designed and
Manufactured on the Pacific Coast!

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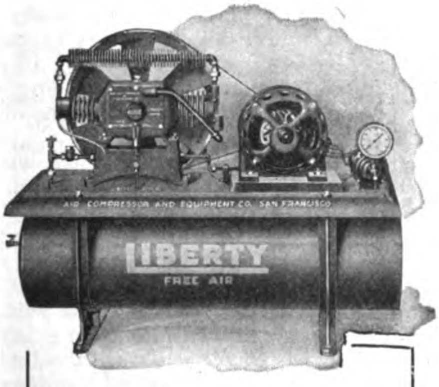

This is one of the many sizes of Liberty's we make. Ideal for medium sized garages, service stations, vulcanizing shops, radiator and sheet metal shops, paintspraying jobs, etc. All parts standard and interchangeable. Practically noiseless. Hundreds of Liberty Air Compressors are giving satisfactory, trouble-free, economical service all along the Western Coast, and hundreds of prospects are waiting for YOU to show them an economical Liberty!

Hundreds of Garages, Service Stations, Vulcanizing Shops, Radiator and Sheet Metal Shops, Painters' Shops, etc., are being opened and established every day—each a Live Prospect for a LIBERTY!

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Jobbers! Get the Liberty Air Compressor rights for your territory! All inquiries from prospects in your territory are sent directly to you. Find out TODAY if your territory is still open, and if so, what our proposition to you means to your bank account! We want only live wire dealers—dealers whose trade includes some of the classes named above, and we're particularly anxious to hear from dealers whose salesmen call on garages, vulcanizing shops and service stations. Don't delay a minute, but write TODAY and FIND OUT all about this proposition. Pin the coupon to your letterhead and tell us all about yourself!

Send the coupon today to the factory, and tell us how you are equipped to go after Air Compressor Business! It's Permanent and Profitable!

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Stephens Salient Six News

New Marked Reduction Made in Prices Following Refinancing, Larger Sales and Production

FOLLOWING the refinancing and new capital strength of Stephens Motor Works, Moline, Ill., comes the announcement of a further marked reduction in the price of the Stephens Salient Six. The new price for the touring car is $1595. This is a further reduction of $150 on top of a reduction of $655 already made, or a total reduction in price of $805 in the past few months.

In trade circles, this Stephens announcement is regarded as one of the most drastic and far reaching price reductions of the year. At $2400 and later at $1745, the Stephens Salient Six was recognized as a leader among the outstanding values in the fine car market. This reduction of $805 since last July is regarded as an important readjustment of values among motor cars of high grade construction and advanced engineering. The new f. o. b. factory prices for the Stephens Salient Six are:

On the 2 passenger roadster, $1575; 4 passenger touring, $1595; 6 passenger touring, $1625; enclosed touring, $2000; 7 passenger sedan, $2550; 4 passenger coupe, $2450.

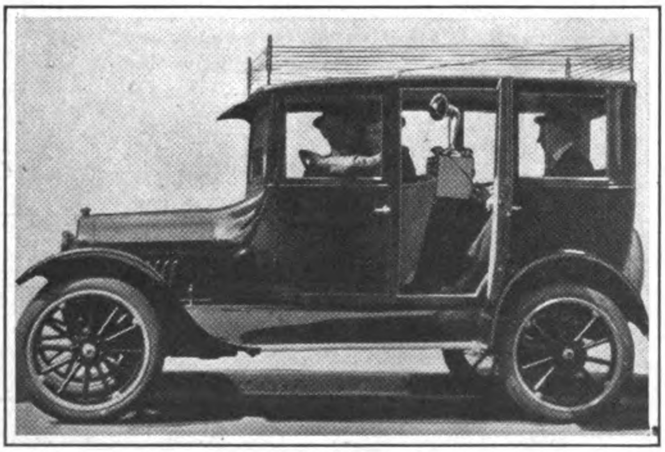
Coincident with the startling price reduction is the further announcement of 31 improvements and refinements in the car. These improvements, it is said, greatly enhance its quality and value. Their importance can be judged by comparison with features similar to them which heretofore have been the exclusive privilege of cars in the $3000 price class. Among the features are noted, for instance, air cushioned upholstery in genuine hand buffed leather; the latest engineering development in steering gear equipment and the use of full-alloy silica-manganese springs, said to be the last word in easy riding spring suspension.

The Stephens Salient Six has won a unique position in the regard of experienced motorists because of its 6 cylinder motor of Stephens design. Its theoretical S. A. E. rating is 25 h. p., but its efficiency is such that it develops an actual 57 h. p. in owner's use. The Stephens has won many tests for flexibility and acceleration, and a speed of 60 miles an hour in 30 seconds from standing start is among the claims for this motor's performance.

The Stephens motor is credited with being the first to introduce compound valve springs—a second set of springs which come into operation when the motor reaches 2000 revolutions a minute and thus maintain power and efficiency at high speed. The motor owes much of its efficiency to the exclusive superheating chamber which is an integral part of it. The hot stoves in this chamber heat the gas coming from the carburetor right up to the explosion point, before the gas is admitted to the cylinders. This feature enables the Stephens motor to deliver 18 to 20 miles a gallon.

The entire car is practically hand-built by the Stephens organization. The factory equipment is very extensive and complete. The increased sales volume and consequent increased production this year permit many marked economies; hence, says the factory, the public shares in these by the new low price.

The Stephens is built by a group of men who have had practical experience over a long period of years in producing comfortable transportation. Their success has been remarkably endorsed this year in letters received from 10,000 owners who reported complete satisfaction with the car after a total of 100,000,000 miles of service.



REMARKS SUPERINDUCED BY A CHEVROLET RADIO CAR. Ponder on the possibilities indicated by the picture, showing a Chevrolet with radio equipment, including a horn, and antennae on the roof. Suppose the car's occupants to be newspaper men, or crop reporters, or persons engaged in any one of a number of other lines. News, orders, any other communications, transmittable or receivable. For transmitting, one ingenious amateur uses the power of the generator on his car. With a radio-equipped car a family can drive anywhere within a radius of say 100 miles, and while enjoying all outdoors also be in touch with a broadcasting station, for music, sermon or whatever is "on the air." One could ponder on and on —the range of possibilities seems limitless.

Midwest Engine-ology Facts

"Engine-ology Performance Facts vs. Advertised Claims," a 7 page mimeographed brochure about the Midwest truck and tractor engine, is issued by Midwest Engine Co., Indianapolis. It might well be memorized by any salesman as a practical method of addressing a prospect. In this case the method is applied to motors.

The claim that the Midwest engine has sold itself as the result of exhaustive service tests is preceded and followed by convincing reasons why that claim is a fact, and why mere advertised claims do not produce satisfactory net results. Basic reasons why Midwest engines have produced such results are given. They range from general design to details.

As to extracting the largest percentage of power from a given quantity of fuel, and using the least percentage of lubricating oil, emphasis is laid on the use of overhead valves as the most efficient, and on having overcome mechanical problems in the construction of this type of valve mechanism.

The crankshaft, the backbone of the engine's working parts, is extremely strong in the high-compression Midwest, its diameter being 60 to 70 per cent of the cylinder bore. Increased diameter means more friction, but this is met by the crankshaft being hollow, and oil being forced through it so that the bearings actually float on a film of oil in ample bearing clearance, there being no metal-to-metal contact. It is stated that bearing surfaces examined after long service have a dark discoloration, proving no wear has occurred. One truck builder certifies that in one Midwest used for 2½ years, and others used for 20,000 miles, not a single bearing had to be readjusted. There is similar testimony that tractors having Midwest engines are free from bearing trouble.

The large volume of oil passing through the hollow crankshaft also keeps bearings cool. Laboratory tests made without this oil cooling system show an 84 degree rise in temperature in one hour, in crankshaft and bearings. Midwest design obviates excessive use of oil, carbonized combustion chambers and valve seats, and foul spark plugs, which otherwise would be a drawback to the system. A relief valve controls oil pressure according to load, not speed. By actual road test, Midwest engines run 1000 to 1500 miles per gallon of lubricating oil.

In the Midwest, internal deflectors deflect cold water from the radiator directly to the exhaust valve seats, where the heat is hottest, especially in a high-efficiency, heavy-duty engine.

Just a few strong points are thus stated. The brochure closes with the offer to prove that Midwest engines can be operated at the lowest operating cost of any engine built.

Victory Highway clubs have been formed at Craig and Steamboat Springs, Colo.

How to Win the Wide World

Best Ways to Help Americanize Motor Transportation Abroad Told By Chairman Rutherford

FACTS, FAITH and fair play are the three primary essentials for success in the worldwide program of Americanizing motor transportation, said W. O. Rutherford, chairman of the foreign trade committee of the Motor and Accessory Manufacturers' Association, commenting upon his recent conference in Washington with Secretary Herbert Hoover and other government officials interested in international trade, as well as representatives of various branches of the automotive industries.

As vice president of B. F. Goodrich Rubber Co., Akron, O., and a member of the board of directors of the national organization representing the automotive parts and equipment industry, Mr. Rutherford is in a strategic position to survey the prospects for overseas business.

"There is a good market for American motor products in foreign countries," said Mr. Rutherford. "The inherent merits of our vehicles and units, our incomparable mass production, our head start, and our general vim and aggressiveness are all in our favor. Except in certain parts of the British Empire and in some French colonial possessions, we have the benefit of minimum tariff restrictions against our exports.

"World markets cannot be captured and held, however, without untiring effort, scientific analysis of fundamental factors, and the highest type of American salesmanship and service.

"Regardless of size or importance, the American manufacturer of automotive parts and accessories will strengthen his position and increase his foreign business by co-operating with his fellow manufacturers through the foreign trade committee of the Motor and Accessory Manufacturers' Association and, through the committee, with the Automotive Division in Washington.

"By this teamwork and contact, manufacturers will get the backing and prestige of the Government behind their foreign efforts, and will have at their command what is virtually a sales or field organization of trained experts in every country in the world, embracing consuls, consular and commercial attaches, trade commissioners for designated territories, and a special automotive trade commissioner safeguarding and advancing their interests at the present time in the Orient. Another will be appointed shortly for Western Europe.

"Fanfare, flagwaving and ballyhoo will not accomplish the results. Foreign trade, like domestic business, must be achieved and advanced by legitimate merit. Spasmodic, last-minute, ephemeral efforts to dispose of surplus stocks through the export game will only prove to be a snare and a delusion. This is no game; neither is it a mysterious process made of ritual and bunk. It is a straight business proposition. The fundamental principle remains unchanged:

HE PROFITS MOST WHO SERVES BEST.

"Some companies have products and facilities which logically justify foreign trade effort. Others have not. We are not urging every concern to go into this field. But if they do go in, we want to help them with the backing of the Government resources, to do so sanely, and profitably. Facts, not fears or hopes, should determine their decision on international trade. The Automotive Division is the storehouse of these facts. The Foreign Trade Committee wants parts and accessory manufacturers to use this reservoir of information, into which flow channels and springs from every nook and cranny of the globe."

Hudson to Buy Control of Essex

Steps for a reorganization of the Hudson Motor Car Co., Detroit, and for the purchase by it of Essex Motors, Inc., Detroit, were taken April 28 with the sale in New York of 400,000 shares in the Hudson Co. at $20 a share. The Essex car has been manufactured by the Hudson Co. under a contract with the stockholders of the Essex, and this move gives Hudson funds with which to buy out the Essex stockholders.

The shares were sold through bankers instead of on the New York stock exchange or curb, because the stock had not at that time been listed, and the issue was oversubscribed 2 to 1. The total new capitalization is of 1,200,000 shares, of no par value, but the remaining 800,000 will be retained by the 18 former stockholders, who up to this time have been the sole stockholders in the company. This enables them to retain control.

Purchase of the Essex, R. D. Chapin, president of the company, announced, will occur within a few weeks. He declined to say what the purchase price would be. He said there would be no change in personnel.

Michigan's securities commission on May 3 gave its approval to the application of Hudson Motor Car Co., Detroit, for permission to recapitalize and absorb Essex Motors. Under the company plan, 1,200,000 shares of common stock of no par value will be issued, 1,000,000 shares to be used to take up old Hudson issues in the ratio of five for one, and 200,000 shares to be exchanged for Essex assets.

Consent to National's Absorption Asked

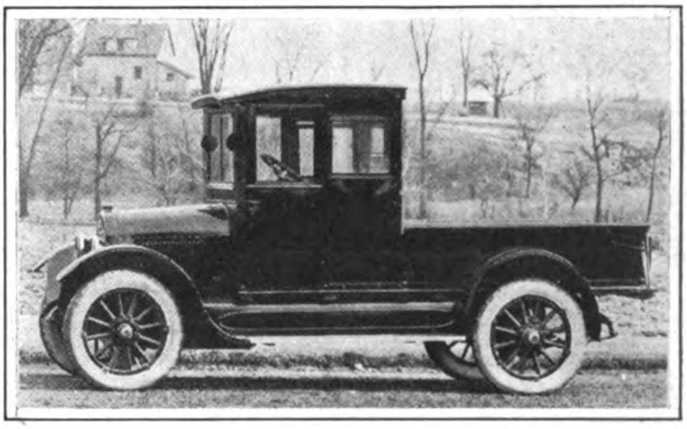
National Motor Car & Vehicle Corp., Indianapolis, has wired creditors for consent to a plan for the absorption of its assets by Associated Motor Industries, Inc. Creditors are asked to accept 10 per cent cash, 25 per cent in one year notes, 15 per cent in bonds and 50 per cent in perferred stock of Associated Motor Industries, which is stated to have ample working capital, with $15,000,000 in current assets. Its fixed assets are estimated to be $10,000,000, which have been used as security for $6,000,000 in 10 year bonds. The National Co. states that banks representing three-fifths of the unsecured claims have assented to this plan.

To Raise Huge Willys-Overland Fund

At Toledo, April 24, Willys-Overland holders of preferred stock voted without one dissent for the directors' plan for a $17,500,000 issue of 7 per cent bonds, to mature December 1, 1923, to fund the bank debt.

April production exceeded that of any April since 1917. Output now exceeds 400 cars per day. Judging by the first quarter, the year will be one of the company's best since the war. It is employing 8000 workers, and advertising for skilled mechanics.

Motorcycles exceed all other motor vehicles combined in England.



ONE OF THREE BUICK SPECIAL DELIVERY CARS.

The picture shows one of three standard body types of Buick special delivery cars. It is the light express, with vestibule, listing at $945. The others are the canopy top, $965, and one with enclosed panel-and-vestibule body, $980. These additions to the Buick line are said to be mechanically as excellent as the passenger cars—full-powered, economical, well balanced, with automatic lubricated 4-cylinder valve-in-head motor, complete Delco starter, and so on. Wheelbase of all models is 109 inches.

Exports Show Fine Increase

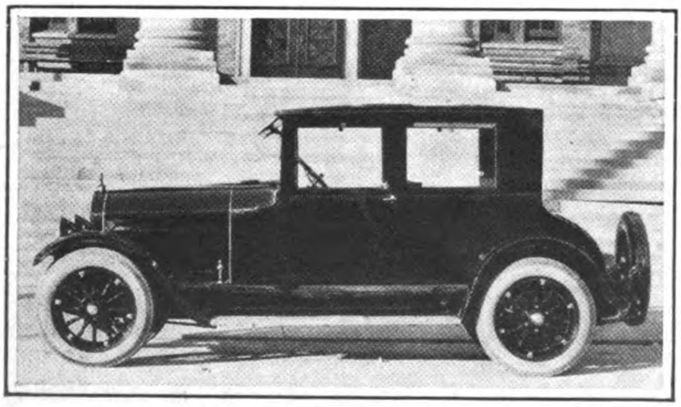
March Automotive Figures Better Than February by 38.9 Per Cent and Total $8,642,041

MARCH EXPORTS of automotive products showed an increase of 38.9 per cent over the previous month, according to statistics compiled by the automotive division of the Department of Commerce. This is especially remarkable considering that February shipments increased 23 per cent over those of January. Passenger cars increased 44 per cent in number and 49.8 per cent in value, totaling 4471 cars valued at $3,831,432. Motor trucks increased 29.9 per cent in number and 41.4 per cent in value, while parts for cars showed an increase of 26.7 per cent. Motorcycles were exported to the number of 1573, valued at $402,039, an increase of 59 per cent in number and 55 per cent in value, while parts for motorcycles increased 48.2 per cent. Classified comparative figures are as follows:

Classification	March, 1922			February, 1922	
	Number	Value	Unit	Number	Value
Passenger cars, except electric	4,471	$3,831,432	$ 856	3,095	$2,556,555
Motor trucks and buses, except elec.	590	554,292	939	454	391,738
Electric cars and trucks	41	57,884	1,411	10	13,842
Station and warehouse motor trucks	19	30,651	1,613	6	11,137
Parts of cars and trucks, except engines and tires	....	3,596,539	....	....	2,838,259
Trailers	125	51,455	411	26	19,230
Motorcycles	1,573	402,039	255	969	259,347
Parts of motorcycles, except tires	....	161,539	....	....	108,971
Airplanes and seaplanes	23	19,850	863	....	....
Parts of aircraft	....	3,230	....	....	10,146
Motorboats	2	3,130	1,565	5	8,550
Total		$8,642,041			$6,217,775

Our leading markets for passenger cars were practically the same as in the two previous months, Canada taking 867 cars valued at $928,359, Australia 786 cars valued at $620,729 and Mexico 596 cars valued at $434,505. Belgium, however, fell off from fourth place to fifteenth, importing only 58 cars valued at $65,835, while the United Kingdom took 247 cars valued at $192,842, an increase of 215 cars over the number imported February. Argentina, British South Africa, Cuba and Japan were the next important markets, as named, all having taken over 150 cars.

Japan was the leading market for motor trucks, having imported 119 valued at $86,731, followed by Canada with 110 trucks valued at $162,904. Although Mexico took the largest number of trucks in February, it fell back to fourth place in March with only 35 trucks imported, valued at $37,446.



THE LATEST COLE AERO EIGHT DESIGN.

The Coupe Brougham, it is called by Cole Motor Car Co., Indianapolis. It is the youngest member of the present Cole line of popular all-season cars. It is of a colorful deep maroon, with black metal parts and upper body panels. It seats five passengers comfortably. The rear seat is solid, and has ample room for two persons. The right rear seat tilts forward, giving easy access to rear seats. The spacious clear vision windows, cowl ventilator, rear deck luggage compartment and extra wide doors make the model distinctive.

Allyne-Zeder Motors Co. Announced

Allyne-Zeder Motors Co., to be a reorganization of Cleveland Tractor Co., will manufacture the new Zeder Six and the Cleveland tractor in the plant of the latter in Cleveland, it is announced. The enterprise will have the backing of Col. George M. Studebaker, Clement Studebaker, Jr., Rollin H. White, R. T. Hodgkins, Fred M. Zeder and others.

The Zeder car is the design of Fred M. Zeder, who is credited with starting the present Studebaker Corp. on the way toward prosperity five years ago.

Clement Studebaker will be chairman of the board of directors. Other officers will be: Rollin H. White, president; R. T. Hodgkins and Col. George M. Studebaker, vice presidents; A. Knobloch, vice president and works manager; F. M. Zeder, vice president and chief engineer; C. D. Fleming, treasurer; F. B. Wilson, general sales manager; O. R. Skelton, assistant chief engineer; and Carl Breer, assistant chief engineer.

May Make Simplex in Maibohm Plant

Receiver's sale of the assets of Maibohm Motors Co., Sandusky, O., scheduled for April 19, was again postponed to give further opportunity for reorganization. A New York banking house is seriously considering a bond issue of $500,000 and a stock issue of at least that amount, contingent upon acquiring rights to manufacture the Simplex car, now owned by Mercer Motors Co. The reorganization plan is being promoted by H. C. Maibohm, who organized the Maibohm Co., and it is understood he has obtained an option on the Simplex assets.

If the plan goes through it is understood a new Simplex car will be placed on the market at a price radically less than obtained formerly. The Maibohm will be discontinued, but certain features of it may be included in the new Simplex, which will be produced in standard models at the Sandusky plant.

Motor Fuel from Low Grade Oils

Contracts have been signed, it is said, between Chemical Research Syndicate, Ltd., headed by F. F. Beall, vice president of Gray Motor Corp., and Barnsdall Corp. of New York, by which the latter will be sole licensee in the United States and Mexico of the hydrogenation process perfected by Dr. A. S. Ramage, by which low grade fuel oils may be converted into motor spirit. Barnsdall Corp. has been testing the Ramage process more than a year to decide its commercial possibilities.

Caused by Demand for Mitchell F-50

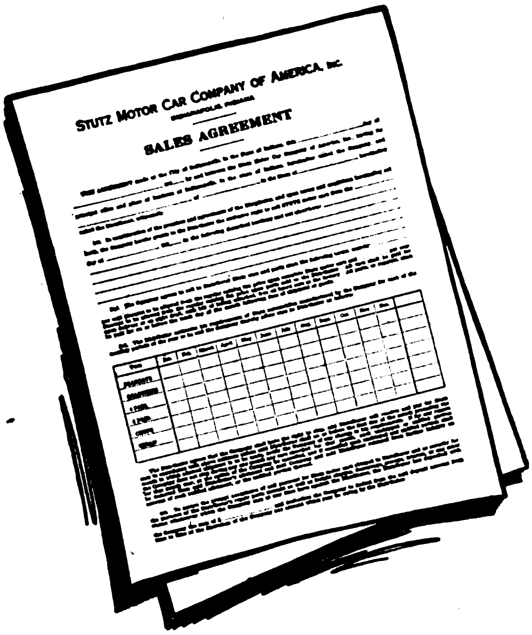
Community sales and service stations in all parts of Chicago is a striking phase of Mitchell Motors Co. having appointed Rockford Motor Co., one of the most successful concerns in the Middle West, its Chicago territory distributor. The enlarged facilities are stated to be in response to the constantly growing demand for the F-50 Mitchell there, as in New York, Boston, San Francisco and other large centers.

Gasoline Still Cheap but Rising

Gasoline recently averaged 21.62 cents a gallon in 30 cities, against 29 cents, high point in 1921. Since March, however, the average price has risen nearly half a cent per gallon.

"Remains Are Yours,' Says Russia

A dispatch from Moscow tells of restoration of the right of private ownership of automobiles in Russia, and it is announced importation of motor vehicles and accessories will be permitted through the foreign trade commissariat.



Stutz Motor Car Company of America, Inc.

Sales Agreement

A Franchise That Gives the Dealer What He Wants

The Stutz franchise was written by Stutz dealers. It reflects their desires and anticipates their actual business requirements.

It gives the dealer what *he wants*. Its terms are outlined to provide not only for present conditions but to eliminate for all time the difficulties which have been encountered in the past.

The "D-H" motored Stutz with Compensating Spring Suspension is rapidly becoming one of the most talked-of cars on the market.

Its performance vests it with distinct selling advantages in the field of fine cars. Its independence from service attention and the ease with which it can be attended eliminate many of the responsibilities which dealers usually are compelled to assume.

The "D-H" motored Stutz meets the needs of dealers and owners in smaller localities just as completely as it expresses the preferences of experienced dealers and owners in metropolitan centers.

Learn what the Stutz franchise will mean in your territory. Write or wire for particulars.

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

A Dozen Highlights in the New Stutz Franchise

1—A perpetual contract—enabling the dealer to build up a permanent business, confident of an uninterrupted factory connection just as long as he shows an inclination to put forth a reasonable effort on behalf of Stutz cars and their owners.
2—Discounts said to be the most liberal now offered among cars in the Stutz price class.
3—No irrevocable obligation to accept car shipments on pre-arranged schedules unless confirmed within 30 days of shipping date.
4—Dealers not overstocked and therefore never forced to assume heavy carrying charges on excessive stocks.
5—Complete daily check-up between factory and dealer enabling factory to adjust its production and shipments to the actual requirements of each dealer.
6—Territories determined by facilities of each dealer.
7—Elimination of all infringement difficulties in relations between dealers.
8—Ample territorial privileges for dealers operating in smaller communities.
9—Interest paid to dealers on all deposits required by the factory.
10—Liberal co-operative local newspaper advertising arrangement for which factory pays major portion of expense.
11—Special provisions enabling dealers in smaller localities to handle Stutz cars with greatly reduced burden.
12—Financial stability and strength of factory makes the Stutz franchise a permanent and definite asset.

If it were possible to offer a more liberal and constructive dealer franchise, Stutz would do it

STUTZ

WITH THE "D-H" ENGINE AND COMPENSATING SPRINGS

Highway Matters

Outline of Highway Economics

A COMPREHENSIVE outline of highway transport, from the time when aboriginal man discovered the first wheel to the present moment, has been prepared by Prof. Lewis W. McIntyre, assistant professor of civil engineering, University of Pittsburgh, for the Highway and Highway Transport Education Committee.

Though making no pretense of being complete, the outline treats exhaustively of the various phases which make highway transport one of the dominant subjects of the day. It was prepared at the urgent insistence of schools of engineering and economics, highway engineers and highway officials. It is expected to be the forerunner of textbooks on the subject, to which many of the leading economists and engineers in the country are giving their attention.

The outline, published in pamphlet form, may be adapted for classroom exercises and lectures, or it may be used by engineers and business men engaged actively in manufacture of motor vehicles or construction of highways. Subdivided into five divisions, it treats of the field of highway transport, the highway and the motor vehicle, legal phases, principles of successful operation and the selling of transportation. One of the subdivisions deals with the interrelationship of highways, railways and waterways, showing how the transport trinity may be so co-ordinated that the most effective distribution of commodities may be attained.

Historically, the outline goes back to ancient days when loads were carried on the backs of men and women, treating successively of the coolie labor, South African negroes, pack animals, the invention of the wheel and, presently, its evolution into carts, chariots, and the motor vehicle of today.

The relationship of highway transport to traffic engineering and city planning, treated in the outline, opens a broad field of speculation, presently to become, to economists, engineers and investigators, the subject of specific analysis.

One of the most immediate phases affecting highway transport, the distribution of traffic and the safety of pedestrians and motorists, is treated at some length, the views of men and women who have given considerable time and thought to this having been ascertained.

As a preface Professor McIntyre says:

"The outline has been limited in various ways. The newness of the subject and the consequent lack of authoritative research make definite conclusions and principles impossible. Therefore an effort has been made to avoid the expression of an opinion, but to present both sides of debatable questions. Some of the topics are capable of considerable expansion; their use will be determined by the local situation. Others may be used almost as outlined. It is confidently expected that use of the outline will develop innumerable suggestions for its revision. Such suggestions or criticisms will be greatly appreciated."

One of the features of the outline is the bibliography that follows the topics under each subhead. Another that is expected to be of definite value to the motor transport operator are the chapters on costs, dispatching and route. The selection of the motor vehicle, dealing with general requirements, type, body design, trailers and tires, will prove, it is said, an invaluable asset to the prospective purchaser of motor trucks.

The booklet is being distributed by the Highway and Highway Transport Education Committee, first to colleges and universities and then upon request to manufacturers and business men. It is interesting to recall that the committee, appointed in May, 1920, by Dr. P. P. Claxton, then Commissioner of Education, has been able within a comparatively brief period to enlist the interest of engineers and economists in a field of transportation held to be an increasingly important factor in the national life.

The sole function of the committee is the study of highway transport in its abstract phases, and to that end consists of men qualified by experience and training to undertake the study, and to encourage it. Dr. John J. Tigert, United States Commissioner of Education, is chairman of the committee. Other members are Thomas H. MacDonald, chief Bureau of Public Roads, Department of Agriculture; Col. F. C. Boggs, Corps of Engineers, U. S. A., representing the War Department; Roy D. Chapin, representing the National Automobile Chamber of Commerce; F. L. Bishop, dean of engineering, University of Pittsburgh, representing the Society for the Promotion of Engineering Education; Harvey S. Firestone, representing the Rubber Association of America; W. S. Keller, state highway engineer of Alabama, representing the American Association of State Highway Officials; H. W. Alden, representing the Society of Automotive Engineers; W. C. John, acting director; and Pyke Johnson, secretary.

The booklet is being distributed by the committee from its offices in the Willard Building, Washington, D. C.

—we are ready to supply

AUTOMOTIVE TRADE

LISTS

that are

GUARANTEED 100% CORRECT

refunding 5c for each return

Lists such as automobile dealers, electricians, garages, battery stations, etc., etc. These can be supplied either by counties or states, and for any territory desired.

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San Francisco, California

Correspondence cordially invited

Daniels Offering Preferred Stock

Daniels Motor Car Co., Reading, Pa., is offering 10,000 shares of its cumulative preferred stock, at 95 and accrued dividend, to yield 8.42 per cent. The object is to clean up bank loans and increase working capital. George E. Daniels was one of the original directors of General Motors, managed Buick distribution in Eastern Pennsylvania, and was vice president and general manager of Oakland Motor Car Co.

Diamond Rubber Co., Akron, O., is upheld by the Federal Trade Commission, as to an Atlanta concern using "Diamond," as a name or as a symbol, in the rubber business.

Valuable Points on Service

To Useful Data, Result of a Survey in 33 States, Is Added a Plea for Standard Practice

By EDWARD CLARK LITTLE,

Editor Anderson Smileage, Published by Anderson Motor Car Co. Rock Hill, S. C.

OUR sales department has just completed a market survey among representative distributors and dealers in 33 states—both those selling Anderson cars and those selling competitive makes. By direct interviews and by letter several hundred dealers and distributors of cars in the same price class as the Anderson were interviewed.

One of the most interesting returns of this investigation was the realization of the rapidly growing importance of service as a talking point in automobile selling today.

Unlike most products, an automobile requires maintenance, and the dealer's responsibility does not end with the sale. Although the average prospect may have a preference for a particular make of car because of the manufacturer's prestige, the appearance of the car, its units, or the performance of other cars of the same make, he knows that the proper functioning of a car while in use depends on the proper maintenance of its parts. It was found that very often the sale of a car in a given community is entirely dependent on the type of dealer to whom the franchise has been given—his integrity, financial standing, and resources for giving service.

The granting of free service on a new car is almost universal. In some cases this is limited to 90 days, in others it extends to as long as 6 months or a year. Sometimes dealers base free service on the amount of mileage a car has run.

Free service is necessary because a car has to be broken in, so to speak, after it has been bought—brakes adjusted, carburetor taken care of, and so forth. The granting of free service leads to frequent confusion and occasional misunderstanding on the part of owners as to what items of service should be charged for.

Some dealers make a distinction in service between labor and material. While they will furnish labor for adjusting brakes and similar jobs, they will not furnish oil and grease free. Others furnish oil and grease free in an effort to get owners to bring their cars in so that they may be inspected.

The many different service propositions in use today lead one to believe that the establishment of certain standard practices would go far to eliminating confusion and misunderstanding in the minds of purchasers of cars.

In the first place, distinction should be made between free service and service for which there is a charge. Also, the distinction should be made that service covers labor but not material. Dealers should recognize that service is a necessary and just part of their overhead expense; that the amount of service they should give on each car should be determined and then charged to overhead. This free service will be found to fall into two classes:

(1) The amount of service and time which has to be spent on a car to tune it up after it is received from the factory, before it is ready for delivery to the prospect.

(2) The service of adjustment after the car has been purchased.

Some dealers believe in the use of coupons or tickets so that the owner may clearly know just the amount of service to expect. In cases where coupons are used, any type of service at all is rendered up to the number of hours stipulated. Where coupons are not used, dealers frequently stipulate that their service does not include overhaul jobs—reseating valves, etc.

In talking service, dealers not only stress the amount of free service which they give, but impress the prospect with their facilities for taking care of his car after the expiration of the free service period. The more progressive dealers conduct prospects through their plant, pointing out the various repair facilities they possess, the number of spare parts on hand, the expert mechanics employed, and promise fair and courteous treatment.

Many dealers have instituted systems which insure proper inspection of cars. This usually takes the form of a printed card, listing all the parts that require attention before and after the sale of the car. Checking this card automatically insures the necessary inspection of every element.

In addition, some dealers have standardized the cost of material and labor for the various repair items. These fixed charges, whether posted or given to customers on printed forms, naturally establish confidence and give evidence of honesty and fair dealing.

Several Changes in Car Prices

Dort Motor Car Co., Flint, Mich., late in April set the price of $885 on model 19 touring and model 14 roadster. Both had been $865.

Franklin prices which took effect recently range from $2200 on the roadster to $3500 on the touring limousine, the touring car being $2250 and the sedan $3175—all f. o. b. Pacific Coast. The touring car had been $2350, and the sedan $3350, f. o. b. factory.

King Motor Car Co., Detroit, announces a reduction from $2125 to $1795 (price a year ago $2835) on the King "8" touring; from $2125 to $1795 on the Foursome; from $2140 to $1795 on the roadster; from $3125 to $2400 on the coupe; and from $3235 to $2550 on the sedan.

Marmon prices were given a new range, effective May 1, of $3185 to $4685, on 11 models. On January 15 Motor West told of reductions by which the range then was $3700 to $5300. The latest reduction means that since May 1, 1921, Marmon prices have come down about 34.5 per cent.

To Have Highway Transport Talk

Highway transport in all of its phases will be discussed at the highway transport section of the annual meeting of the Chamber of Commerce of the United States which takes place in Washington, May 16.

T. H. MacDonald, chief of the Bureau of Public Roads, will speak first on Economic Foundation for Future Highway Progress. He will be followed by E. J. Mehren, editor of Engineering News Record, who will discuss Practical Highway Transport Regulation.

The European transportation situation will be discussed May 17.

The highways committee is composed of Roy D. Chapin, chairman; George M. Graham, William E. Metzger, E. S. Jordan and A. J. Brosseau.

Those who kept up advertising are finding it paid.

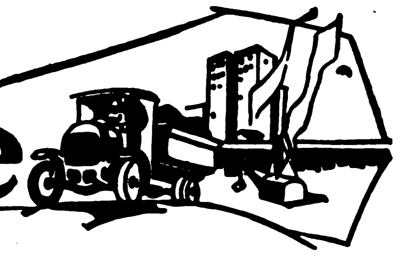
Car and Truck Makers Urge Safety Tag

MOTOR car and motor truck manufacturers of the National Automobile Chamber of Commerce have recommended that with each new car put on the market, a safety tag be provided, setting forth some fundamental traffic precautions to encourage safe driving. A sample form of recommended suggestions follows:

THESE CAUTIONS MAY SAVE A LIFE.

1. **Always remember you are an engineer, fully responsible.**
2. **Inspect your brakes at least once a month.**
3. **Never pass to the left of a street car.**
4. **Never pass a street car when it is stopping for passengers.**
5. **Always signal with hand when slowing down, turning or stopping.**
6. **Sound horn three times when backing.**
7. **Observe the traffic rules carefully; they are made for your safety.**

The Car of Commerce



Truck Outlook in Foreign Fields

THERE is excellent co-operation with automotive interests by Herbert Hoover, Secretary of Commerce. His department is gathering much information of value in various parts of the world, as shown by such reports as the following, concerning the motor truck outlook in foreign lands.

The sale of American motor trucks in France is greatly hampered at present not only by the French import duty of 45 per cent ad valorem, but also by other adverse circumstances.

The difficulties in the Lyons district, says Vice Consul Fullerton, are due largely to the depreciation of French exechange, the activity of French truck manufacturers who are able to promise immediate delivery (the Berliet factory has its plant at Lyons), the existence of large army stocks and the alleged inadequacy of repair facilities for American cars, resulting from the lack of spare parts and experienced workmen. It is believed, however, that connections made now will be of value in the near future.

Owing to the exceedingly high price of gasoline, motor trucks are being used to a very small degree in the Limoges district, according to Consul Delisle, and industrial firms are unwilling to substitute motor trucks for horses until the cost of fuel is reduced. Consequently large quantities of raw materials and finished goods are being carried to and from railway stations to all quarters of the cities by horses, and some large trucks were purchased from the American army stocks, while the number of lighter models is negligible. There will be little opportunity for the sale of motor trucks for several years.

The very small demand in the Nancy district is due largely to liquidation of army stocks, and as long as the general depression lasts no improvement in the motor truck market can be expected. The 1½ and 5 ton sizes, with low gasoline consumption are preferred.

Reports by Consuls Honey and Jewell at Bristol and Birmingham, Eng., respectively, are that the market for motor trucks in the United Kingdom is decidedly unfavorable, the most important reason being oversupply on account of surplus army stocks at Slough, in Berkshire, and the policy of the Government in realizing on these supplies on the deferred payment basis. Agents of motor trucks manufacturers say they are unable to move their stocks because of the far more advantageous price and credit terms being offered by the Government, which is selling reconditioned trucks, with a six months guarantee, as low as £50, whereas local dealers have had stocks on hand for over a year which they offer at £700 to £800.

In Scotland there is general stagnation in trade and industry, and until the revival is apparent, prospects for sale of motor trucks are not encouraging. Demand will be chiefly for the heavier types, but light delivery wagons are enjoying increasing popularity, according to reports from Consul Johnson, at Dundee, and Consul Chamberlain, at Glasgow.

Prospects are good generally for the sale of motor trucks in Brazil, especially in the 1½ ton size, according to consular reports received by the Automotive Division, Department of Commerce. Contingent factors, however, are the betterment of exchange and improvement of roads.

While business is improving slowly the demand for motor trucks in Sao Paulo, of which there are about 800 in the district, will continue to increase as there is a decided campaign on for the improvement and building of roads. The city of Sao Paulo is more or less the industrial center of Brazil, and motor trucks are much used there.

While at present and for some time to come Bahia offers a poor market, there should be a fair demand for heavy service trucks when exchange becomes normal. High price of gasoline and cheapness of labor are serious drawbacks. Large quantities of heavy goods, such as hides, skins, cocoa, sugar and tobacco constantly are being moved from warehouses to docks. At present this merchandise is transported by small 3-wheel carts, capable of carrying about ½ ton each, and on account of the large number required, traffic often is blocked. There are not more than a dozen trucks now being used in Bahia.

The market for motor trucks in the Rio de Janeiro district is limited to the city of Rio de Janeiro, the main hindrance being lack of roads outside. Country traffic practically is limited to ox carts, the roads being unfit for automotive vehicles. Trucks sold in the city of Rio de Janeiro are mostly 1½ ton capacity. The 7 ton type may be classed second, with the 2, 5 and 3 ton models next, in the order named. The number of trucks in the district is estimated at about 500.

At present depressed financial conditions prevail in the Porto Alegre district and the importation of motor vehicles has been reduced materially. Even in normal times, owing to lack of good roads, demand for motor trucks is limited, and their use is almost exclusively confined to the larger cities. The majority of trucks are of the 1½ ton sizes, equipped with bodies constructed locally.

At present the truck business in Asia Minor is exceedingly dull, due to unsettled conditions throughout the Near East. An attractive field for the sale of all kinds of automotive products undoubtedly will be offered in Asia Minor, according to Assistant Trade Commissioner Gillespie, at Constantinople, when peace is reestablished and the several trade routes leading out of Constantinople are reopened.

British and French West Africa have begun to import trucks to a considerable extent, says Consul Yerby, in Senegal. Though money is scarce, importers are quite prepared to do business. Trucks are used in collecting raw products and transporting them to the railway, river and shipping stations, and for the distribution of imported goods. The seaports have begun to use trucks almost exclusively for hauling instead of the old method of head carriage. The ½, 1 and 1½ ton trucks are preferred. In most of the colonies heavy trucks are prohibited.

Westcott a Kelly-Springfield Director

R. J. Westcott, president of Westcott Motor Car Co., Springfield, O., and treasurer of American Seeding Machine Co., has been elected a director of Kelly-Springfield Motor Truck Co., to succeed J. B. Cartmell, who resigned owing to increasing business in banking circles.

Looks as if 250,000 new motor trucks will go into service this year.—M. L. Pulcher, general manager Federal Motor Truck Co.

A tool in the kit is worth thousands in the garage.

Will Need 4000 Trained Men

Highway Transport Outlook for Next Ten Years Visioned by N. A. C. C. Truck Committee Head

WITHIN the next ten years 4000 specially trained men will be needed for service in the highway transport business, declared F. W. Fenn, secretary of the national motor truck committee of the National Automobile Chamber of Commerce, in an address before the students and faculty of Massachusetts Institute of Technology, in Boston, March 24. Mr. Fenn said in part:

"The whole field of the highway transport is practically virgin. It welcomes the entrance of trained men. Men of the very highest professional ability are daily turning to it; only recently a former governor entered the field.

"The success of the experiment in allocating to motor trucks the interchange of freight among the eight railroads entering Cincinnati, which has resulted in eliminating 300,000 switching cuts, is going to mean its duplication in every major terminal center.

"It is fairly certain that the next great development in this country in transportation will be, therefore, a national delivery service for picking up traffic at the point of origin and making delivery at the store door of the consignee. The motor truck offers the best solution of this problem, in the opinion of many railroad officials. Only this past month the transportation of freight between the New Jersey rail terminals of the Erie Railroad and New York City has been effected by means of trucks.

"It is now an established fact that motor trucks operation can be substituted for short branch line railway operation, trap car service, suburban railroad and terminal distribution. The New York, New Haven & Hartford, the Baltimore & Ohio and the Northern Pacific, are already using trucks with flanged wheels on short branch line operations."

Mr. Fenn called attention to the fact that the committee on the development of the motor bus of the New England Street Railway Club recommended at its last monthly meeting that in many instances it would be preferable to install bus service instead of trackless trolley equipment. This was felt by the speaker to be the logical development in urban passenger transportation. There are now 20,000 motor buses servicing the congested and undeveloped areas of our principal cities.

It was also pointed out that approximately 75 per cent of the hauling in the Texas and Oklahoma oil fields is by means of specially designed truck and trailer combinations. Mr. Fenn said:

"There is no question that the motor truck is a very important part of the operator's equipment in the production of petroleum. The impressive sizes to which the truck fleets of some of the largest oil companies in the world have grown during the past few years is a striking confirmation of this assumption.

"There is every reason to believe, also, that in the transportation of coal and other mine products from the mouth of mines there will be from now on a marked tendency to utilize power trucks. Just how extensive this movement will be may perhaps be judged from the fact that the products of approximately 3200 mines are being carried by either motor truck or wagons at present.

"Just a short time ago the opinion was ventured by several prominent lumbermen that within the next three years all mules and oxen now in use in Southern lumbering will be replaced by tractors and trucks. Various methods of transportation have been employed from time to time in handling our forest products; but in the last few years lumbermen in general have displayed a keenness for inquiry and observation that has resulted in the development and use of many new devices, especially trucks, intended to save both time and money for lumber producers."

Gramm Fuel Economizer Test

Recently there was described and illustrated in Motor West a new device for Gramm trucks, manufactured by Gramm-Bernstein Motor Truck Co., Lima, O., known as the Gramm fuel economizer. It has been found to effect a real saving in fuel consumption upon this make of truck. The device is placed between the carburetor and the intake manifold and serves to pre-heat the gasoline vapor. The heat from the exhaust gases is utilized for this purpose and by a peculiar arrangement in the inside wall of the economizer, very surprising results have been obtained.

One of these outfits was tested out very thoroughly recently upon a 3 ton Gramm truck, model 30, by Willard J. Gramm, chief engineer of the company. A 1 gallon tank was hung on the side of the truck and attached by a gasoline and the truck was run until it stopped when the gasoline was used up. The first trip was made without the economizer, having the carburetor bolted directly to the intake manifold, and the second trip was made in the same direction and under exactly the same weather conditions, with the economizer in use. It was found that the truck ran 7 miles without the economizer and 7.45 miles with the economizer, giving 6.4 per cent increase in mileage to the gallon.

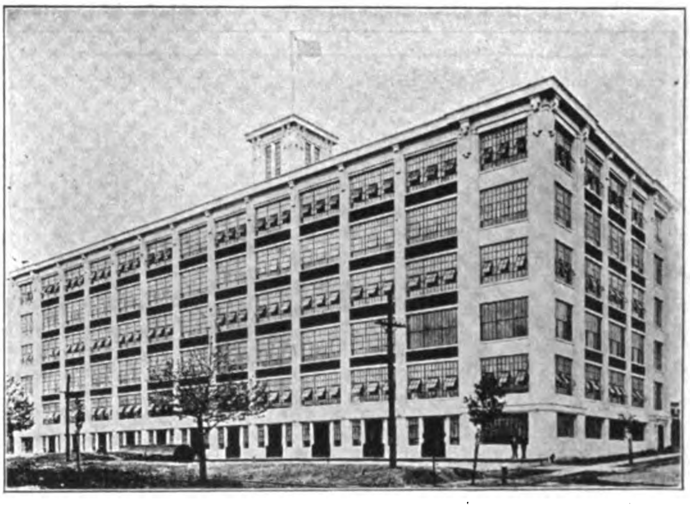
The truck was loaded to capacity when tested and was a new one.

The company expects even better results upon a truck which has been in service for some time, and during warmer weather conditions.

Bethlehem Motors is Reorganized

A reorganization meeting of Bethlehem Motors Corp., which produced 6000 motor trucks between January 1, 1917, and July 1, 1919, was held in New York on May 4. Arthur T. Murray, who headed the old corporation (sold recently at receiver's sale) when it was formed late in 1916, is chairman of the board, and the man said to be responsible for most of the success of the original company, Howard B. Hall, is president. That much may be expected of these two industrial captains is indicated by their past performances.

Ford Motor Co. will begin late this summer to supply its 1 ton truck, both as chassis and complete. The design of the body has not yet been definitely determined, but it will be a combination type. It is reported Ford will enter the 3 ton truck field late in the summer.



PYRENE MFG. CO.'S NEW PLANT IN NEWARK, N. J.

Formerly the organization of Pyrene Mfg. Co., well known manufacturer of Pyrene fire extinguishers and a full line of fire-safety accessories, was spread considerably—factory at one point, warehouse at another, general office as still another, though all in New York City. Now the entire facilities of the American company are housed in one thoroughly modern, fireproof building at 520 Belmont Ave., Newark, N. J., with 125,000 square feet of floor space. There are warehouses in Chicago, Atlanta, Kansas City and San Francisco. The company also has factories in London, Eng., and Montreal, Can.

Wail From a Railroad Man

Control of Electric Lines and Motor Transport by State Commission Called a Crying Need

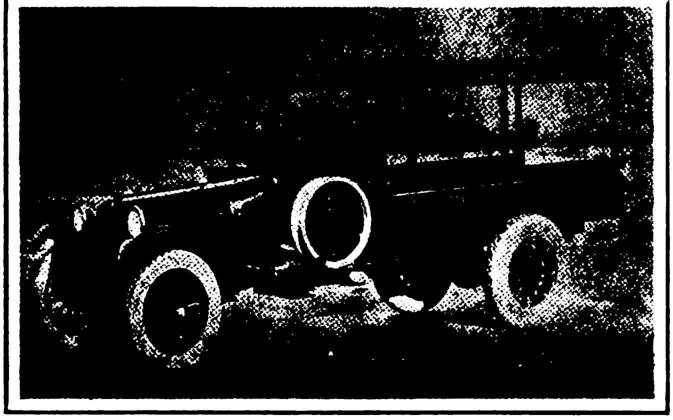
ABSOLUTELY and deeply it is true that the same early railroad men who polluted politics and grabbed as much of a number of kinds of money making privileges as they could, did pioneer work which cost many of them dearly and without which this country would not be in the wonderful state of progress it is in today. Nevertheless the railroad men of today, in matters like the following, in which there is complaint against alleged discrimination in favor of motor transport, overlook mentioning the huge land grants made to the railroad companies in the earlier days. With that reminder to the reader, let the news go on. The following was sent to Motor West, as to the newspapers of California:

"Until franchise burdens and the injustice of subsidized commercial automobile competition are corrected, electric railways cannot take their rightful place in the development of California," W. V. Hill, manager of the California Electric Railway Association, told delegates to the California Real Estate Association convention, recently.

Mr. Hill pointed out the difficulty of financing electric railway companies because of the fact that in all California cities, except Oakland, franchises of such companies are limited to from 20 to 25 years. "You can at once appreciate the difficulties of financing a property on 40 or 45 year bonds when franchises run about one-half the life of the bonds, and with all the uncertainties that are likely to arise and have arisen at the expiration of the franchise," said Mr. Hill.

"There should be a drastic change in our system of granting franchises. This power should be vested in the state railroad commission. It is too large a problem for the average city hall politician to handle. It is a state problem, for most of the electric railways operate in more than one city. The Pacific Electric, for example, operates in 52 incorporated cities and towns. Just imagine conforming to the different franchise requirements of these municipalities." To give contrast to this situation, Mr. Hill said:

"In California there are some 800 companies and individuals operating about 2500 large buses and trucks as common carriers over the highways—which the railways are being taxed to help build and maintain—and doing business estimated to be close to $20,000,000 annually, or about a third of the gross business of the electric railways; destroying these highways without paying anything in the way of rental or taxes therefor, excepting a pittance of a motor vehicle tax, and a nominal license imposed by less than 10 per cent of the cities and counties in the state. Of all the impositions ever placed on an industry, I consider this the worst."



GRAHAM TRUCKS SOLD BY DODGE BROTHERS SALE FORCE. Four years ago Graham Brothers entered the truck field. Their plants in Evansville, Ind., and Detroit, have done well. Graham Brothers trucks, for 1 and 1½ ton loads, have a wide range of bodies. It is claimed that the 1½ ton model weighs 1500 pounds less than the average of 50 other leading 1½ tonners, the 1 ton 650 pounds less than others, and that the horsepower rating, 24.5, is 2 to 3½ horsepower more than the average of 50 other 1½ ton or 50 1 ton trucks. Repair part costs of both are said to be about 50 per cent lower than for others of same capacity. The Dodge Brothers power plant is used and marketing is exclusively by Dodge Brothers' sales organization.

How Lon R. Smith Reads the Signs

Lon R. Smith, vice president of Midwest Engine Co., Indianapolis, writes:

"In my estimation one of the noteworthy indications that business is now reaching its own is through the releases which are being placed on contracts for Midwest engines by customers. These releases have temporarily, at least, made it difficult for production to keep up with deliveries wanted, although production is now swinging closer to delivery promises.

"In the last ten days we have closed additional contracts with three truck and one tractor manufacturer for their 1922 requirements. One of the truck makers, the largest of its class in America, will make an interesting announcement within the next 30 days.

"The railroad division of Service Motor Truck Co., Wabash, Ind., has also released a large quantity of Midwest 4¾x6 inch engines for its gasoline propelled railway coach. This particular engine is a comparative newcomer in the Midwest line, having been developed for the heavier duty class requiring high speeds. It develops and we guarantee 59 h. p. at 1200 r. p. m. and 70 h. p. at 1500 r. p. m. The torque peak is increased 50 per cent over that of the 4½x6 inch Midwest engine."

A $500,000 Order for Kalamazoos

Kalamazoo Motors Corp., Kalamazoo, Mich., manufacturer of Kalamazoo motor trucks, has closed a contract with the Highway Contracting and Equipment Co., Chicago, calling for over $500,000 worth of Kalamazoo dump trucks with 1½ yard bodies, to be delivered in monthly allotments.

The operation of the Chicago company is unique in many respects. Each truck operator owns his truck and is under contract with his company, guaranteeing his services, thereby enabling the company to avoid the usual truck driver labor turnover which has been detrimental to the fulfillment of many hauling contracts in the past.

Each truck owner is provided with a life insurance policy by the company and, also, an accident and health policy providing a weekly income, sufficient to permit the employment of a substitute driver without impairing the owner's income from the work of his truck.

Draymen Offer Co-Operation

Co-operation of draymen between Marysville, Sacramento, Stockton and Vallejo in the enactment of proper motor vehicle regulations for the protection of state highways was reflected in a meeting held recently in Sacramento between members of California Highway Commission and members of the Draymen's Transportation Corporation. The delegation of draymen was headed by Senator J. M. Inman, and consisted of C. E. Wilkins, C. C. Lockett, H. S. Dawson, W. C. Russell, J. W. Galway and G. F. Albright.

The draymen expressed a desire to see motor transportation brought under proper regulation, and measures taken for the protection of highways and the apprehension of irresponsible truckmen who injure the business and the highways by gross overloading and speeding.

The General Motors Truck Co. plant at Pontiac, Mich., which is producing 35 trucks a day, is to have a new 4 story test house added, according to Vance Day, president and general manager. The new building when completed will increase capacity to 100 trucks a day.

There are jay drivers as well as jay walkers.

During the financial depression through which the country has just passed, not one single GMC distributor failed in business.

This is the best possible evidence of the demand which always exists for GMC trucks and the value of the GMC franchise to motor truck dealers.

GENERAL MOTORS TRUCK COMPANY
Division of General Motors Corporation
PONTIAC, MICH.

General Motors Trucks

WOLVERINE

Electric Lighting on all models

Electric Starting on all models

36 HOUR SERVICE SAN FRANCISCO TO LOS ANGELES
CALIFORNIA HIGHWAY EXPRESS
HOUSEHOLD GOODS

Wolverine Trucks are daily writing new records in transportation history in California by their unequalled performance on regular, scheduled trips to San Francisco and return, carrying capacity loads and rendering continued and faultless service at low cost.

AMERICAN COMMERCIAL CAR CO.
Manufacturers

BRAUN-STECKER-STEVENS, Inc., Western Representatives
823 South Flower Street, Los Angeles, Cal.

Testing Truck Effect on Road Edges

Some of the lighter sections of the Bate experimental road, in Illinois, failed under the traffic of light trucks driven along the edges of the surfaces on the first day of the test. The road, which was especially constructed for the experiments now being conducted by the state highway department of Illinois in co-operation with the U. S. Bureau of Public Roads, is 2 miles long and consists of numerous sections of different types.

On March 30, the day the road was opened for the tests, 12 trucks with bodies removed to make a load of 2500 pounds on each rear wheel were started on the trips, which will continue with increasing loads until the suitability of each type is determined. The trucks were driven so that the outside wheels were on the edge of the paving, and almost immediately some of the sections began to fail. This was expected, as the sections were of light design and intended to demonstrate the futility of such construction.

The road will be subjected to a number of tests under the destructive pounding of the trucks, and it is expected that much valuable information will be gained for use in future road construction. In addition to specialists assigned to investigate soil conditions, temperature effects, and other factors, five engineers are constantly observing the effect as the trucks continue their daily grind. The experiments will continue until all the sections have been thoroughly tested.

Quick GMC Truck Repair in Idaho

Because of the accessibility and ease of repair which have been designed in the construction of the motor of the GMC truck, made by General Motors Truck Co., Pontiac, Mich., reports of record speed in repair are not uncommon. One of the 2 ton trucks of the K-41 series was making a run in the mountains of Idaho recently, under especially severe conditions, when one of the connecting rods broke. The truck crew was miles away from a repair station and all the "field equipment" it had was pretty much like Gunga Din's. It consisted only of the ordinary tool kit supplied with the truck. The crew had an extra connecting rod, though, and with the tools available made a roadside repair in 2 hours and 40 minutes. One reason, says the factory, was that in the connecting rod assembly the bearings are sweated onto the rod so that they are integral with it. More than that, this method assures unusually good balance in the rod itself—something worth having in truck equipment. The men who made the repair were not especially trained mechanics, and the rapidity of repair was made possible by the design of the GMC truck motor and transmission.

Paying Much Attention to Buses

Truck makers today are paying more attention to buses than to commercial cars or trucks for haulage, and one large maker reports 85 per cent of his manufacturing in the truck field is buses—and he is busy. Hardly a maker but is pushing the bus end of the business, with the result that motor driven street cars, without necessity of rails or trolleys, are making their appearance everywhere. They are feeders for main lines of transportation and are opening up new sections of the country. This is causing much worry to the street car companies, which in several instances have given way entirely.

Many believe that ultimately bus systems will drive the trolley systems, with their obnoxious poles, overhead wires and noise of operation, off the streets.

Agricultural Commission Gives Praise

The Joint Commission of Agricultural Inquiry sees in good roads, and motor trucks, one of the ways of solving the farmer's difficulties. Part one of the report on "The Agricultural Crisis and Its Causes" says: "Good roads to local markets, joint facilities at terminals connecting rail, water, and motor transport systems, and more adequate facilities at shipping points, will materially contribute to the reduction of costs of marketing and distribution, to the mutual benefit of producer and consumer."

Tractor Department

Will Farmers Buy Tractors in 1922?

WHEN a farmer becomes convinced that a tractor will make money for him he can and will buy that tractor, nine times out of ten, writes Earl B., Stone, advertising manager of Cleveland Tractor Co., who continues: Like all the rest of us, he is looking out for himself and he is strong for anything which will save money on his producing costs or increase his yield so that he has a bigger profit at the end of the year.

This dollar-saving, dollar-making sales method has been the one really successful approach to the farmer since the introduction of modern labor saving implements, but the trend of conditions during the last 18 months will make it particularly effective in the farm field during 1922.

The question of whether or not farmers will buy tractors in 1922 has, to a great extent, been answered for them. The greatest responsibility lies with the dealer, who must sell on the basis which his market understands and appreciates, if he would himself make money in 1922.

After talking with a considerable number of farmers and with agricultural experts from many sections of the country, who visited the National Tractor and Power Farming Show at Minneapolis, the factors which have combined to build a substantial tractor market for this year become convincingly apparent.

Late in 1920, farmers as a whole divided themselves into two classes on the question of what to do about the prices they were getting for their crops. One class—and by far the largest—called the drop in prices a "depression" and decided that it could not last. So out of the scrap heap of agriculture they dug antiquated methods and worn out machinery, and with these they set to work to produce a new crop. Any old kind of a crop, so long as there was no investment, was their aim. But with the harvest over, they found that they had lost. Prices had not recovered as they had expected—the oldtime methods and machines had produced only a small crop—and, worst of all, its cost was higher than they had anticipated.

The other class, judging the new standard of prices to be a necessary "readjustment," set to work to produce a new crop at the lowest possible cost. While replacements in equipment were few, they made the most of what they had and many of them added a tractor for its ability to work fast and long and well. These farmers got a good crop, paid less to raise it than ever before and, either made money or at least "broke even."

Almost any tractor dealer can apply these class divisions to the farmers in his territory. The one class told him they would wait a year before buying, the other bought last spring and are now ready to add still more up to date machinery to their farms. No single year in the history of agriculture has given as much widespread impetus to power farming as did 1921, with this convincing record of the failure of old methods and the success of power on the farm.

Unyielding circumstances have forced the majority of farmers to recognize the money saving value of farm power. Old methods and old machinery are back in the scrap heap, where they belong. Fruitless attempts to control prices have given way to successful efforts to reduce costs. In a single year economic conditions have "sold" power farming more thoroughly than the combined arguments of all the power farming dealers in the world could have done the job.

In this new order of things the tractor dealer has both a great opportunity and a new responsibility. He can make money if he will. There are dollar saving features in his power farming line, and there are farmers who will buy, once they know that there is money in it for them. The attitude that will win was aptly expressed by a successful Cletrac dealer, T. Frank Caffee, manager of Lakeshore Motors Co. of Sturgeon Bay, Wis., when he said: "It seems to me that from now on, we can render the interested farmer no greater service than to sell him a tractor."

There would be no question as to the brightness of the tractor business in 1922 if every tractor dealer would adopt that idea as the basis of his sales campaign.

The tractor dealer need no longer depend upon more or less odious comparisons with other methods to sell his proposition. The idea of power farming is firmly established. His sales this year will depend upon his ability to apply the general idea in a concrete way on his prospect's farm.

To go after tractor business will be to get it. Early plowing, better seed beds, and a longer growing season are bound to produce bigger yields. The tractor dealer can get at the job the first day the land is fit, and prove to his prospect in two hours that tractor plowing will bring him greater profits at the end of the year.

And the prospect who cannot be closed in the early months of the year is due for a haying, harvesting or threshing demonstration, where power and endurance count most of all, and where the tractor again proves positively that it will make money for its owner.

In addition, there are the specialized farms which raise potatoes, truck stuff, sugar beets, berries. Also there are the orchards and vineyards. All of these must come in for their share of attention and demonstration, for they, too, are "sold" on the use of power and want only the proof of their belief to close the deal.

We are all interested in knowing whether or not the farmer will buy tractors in 1922. The farmer says "Yes, if they will make money for me." The agricultural leaders in colleges and private organizations agree that "power farming is the only solution to the cost-to-produce problem" and definitely favor "lower cost" rather than "higher price." The dealer, with these two basic influences favorable to him, can answer the question with a positive "Yes" if he will go out and demonstrate that there is money in the use of the tractor on the farm.

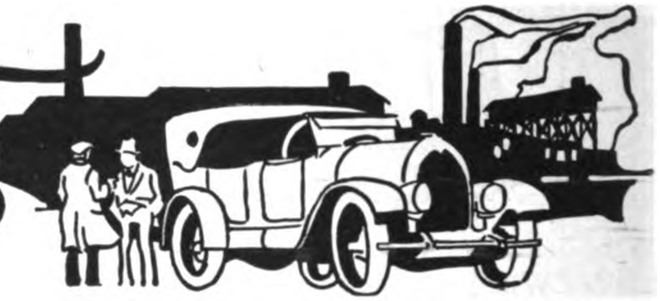
Facts Affecting Tractor Interests

The Power Farming Bureau, which was organized a year ago to promote publicity in behalf of tractors, has been succeeded by the National Institute of Progressive Farming. Guy H. Hall, well known as secretary of the Kansas City Tractor Club, and manager of the tractor shows held in Kansas City, is manager of the new organization. Headquarters will be in Chicago. It is supported by tractor and farm implement manufacturers and by organizations supporting progressive and diversified farming movements.

In Oregon an anti-alien law petition is being circulated; the proposed measure to be similar to the California law, and almost identical with the one Oregon's house passed at its last session but which its senate failed to pass. The American Legion is behind the movement.

National City Bank, New York, showing fluctuations since 1870, shows more persons now work in factories than on farms—first time in the country's history. From 1800 to 1920, women gainfully occupied increased to 8,594,000, about 221 per cent; males, to 33,059,000, about 124 per cent.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

There is a car shortage. Through skepticism regarding the future, the makers would not manufacture ahead, and dealers and distributors would not buy ahead. Usually the spring season is entered with many thousands of cars in storage. That was not the case this year. A long time ago the probable shortage was discussed, and manufacturers laughed at the chance of any such thing. Nor did it seem likely, with general business conditions as they were—and are, for in other lines of business there has been no such improvement as in the automotive field.

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Not only passenger cars but trucks and tractors are selling. The recovery in the truck field came with more unexpectedness than for passenger cars, and tractor people, who took into mind the condition of the farmers, looked for no such business as they are doing. The truck men believed their return to good business would be in 1923. Truck makers generally now claim a 50 per cent production. That is almost a 50 per cent recovery for them, for most truck makers were doing nothing.

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Advertisements for experienced men in the automotive trades have been frequent of late, and particularly by the body makers, who are forced to hold back the production of vehicles perhaps more than any other class of suppliers.

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It is said makers generally are so far behind orders that it will take until July 1 to catch up. That surely is good news. The former misrepresentations about production did no real good; did not bring business back. The come-back has been so pronounced that many wonder if it can last through the year. Many are looking for a summer slump. But even that may not come this year, so great is the need of replacement of cars worn ragged.

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April gave a new high figure and May orders swamped the manufacturers, who had refused early in the year to give specifications for material more than 30 days ahead. In February some extended specification periods to 60 days. Now the makers are begging the parts people to rush production. In this respect times have changed, surely, for during the last year makers have been playing ducks and drakes with the parts men, who declared they would bide their time and have the manufacturers, figuratively speaking, at their feet. These part makers refused to manufacture ahead with a view to prospective orders. They said during the dark days that they would assume the same position that the makers took, and would manufacture only according to specific orders. The motor and accessory and parts makers could not get going quickly, for working organizations long idle and scattered had to be rebuilt, and that takes time. Raw materials had to be secured and that also takes time.

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Some idea of the present year's business is to be gained by the statement of Alvan Macauley, president of Packard, who says April sales exceeded $6,500,000, or more than half of the total business for the first six months of the Packard fiscal year, which started last September.

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Take a general review of the makers: Cadillac has 25 per cent more production than ever before; Paige-Detroit, with 2700 production in April, broke all its records; Hupp output is the biggest in years, with indications that May will break all records again; Hudson and Essex find a shortage in these cars in almost every part of the country; both were at capacity production in April, and before June 15 will have passed the production figures for all of 1921. Shipments for the second quarter will total 123 per cent more than for the same period last year. Rickenbacker production in April exceeded 400 cars, in spite of the fact that it started production in January with a few cars for show purposes. Columbia has had orders for cars to be shipped by express to California, the second shipment of this sort to J. W. Leavitt.

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In view of general business conditions, as outlined state by state in a New York paper by Archer Wall Douglas, chairman of the committee of statistics and standards, Chamber of Commerce of the United States, there is small wonder that business interests generally are marveling at the remarkable comeback of the automotive industry. Mr. Douglas directed the preparation of a map showing, still, only one white spot of consequence, and that one—Los Angeles and vicinity. The parts of the country marked fair include the remainder of California, a small section in Eastern Missouri, some states or parts of states in Mississippi Valley, and some spots along the Atlantic Coast. The map shows more than two-thirds of the United States still poor in business. Yet in the face of all this the motor car business is booming along, and record-breaking production is a fact with some manufacturers.

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It seems to be a fact that the farmers are buying, as evidenced by reports of shipments to territories supposedly dead until after the coming harvest anyway. Mr. Douglas says that in farming districts there is little concern about the immediate future, but that the tendency is to do no guessing and to make no commitments until after the coming harvest. He also says pointedly: "The numerous prophecies of nearby prosperity inspired by the study of various barometers are generally regarded as being written for public consumption and are not taken very seriously. The immediate concern is to get a volume of business commensurate with an expense account which will not down." Mr. Douglas gathers his facts through extensive travel and study.

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However, comma, as Brer Schell would say, the sales by automobile manufacturers are keeping abreast of many factory outputs. Production is speeded up, yet there is no large surplus of finished vehicles carried to take care of spring business. April is gone, with no apparent let-up, and manufacturers who set an April schedule had to make increases to keep pace. They increased when parts makers could supply material. Some were held back on account of inability to obtain the necessarv components. April showed a gain over March, as March did over February.

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It is shown that production ran 390,000 cars for the last three months, or 65 per cent gain over the same period last year. National Automobile Chamber of Commerce had reports by wire from 40 sections early in May and found sales of both passenger cars and motor trucks on the up trend.

Fine day? If not, there'll be a lot of 'em along soon. The cloudy days sure made the flowers grow.

Saxon's Ypsilanti Move a Fact.

What was proposed now is a fact. It is announced by Harry L. Bill, vice president and general manager of Saxon Motor Car Corp., that the entire plant and executive offices have been moved from Detroit to Ypsilanti, Mich.

It is stated the action has many economical advantages and this, plus the fact that Saxon is enjoying a very good business at this time, puts the company in a very secure position. Not only is its domestic business good, but it is enjoying a very healthy export business, coming from various parts of the world. Its domestic business, moreover, is well scattered through the country.

The same executive organization is maintained with Mr. Bill at its head, and Saxon affairs are stated to be progressing at a very promising rate.

Saxon has started operations at Ypsilanti on a schedule of five cars daily, this to be increased to 10 a day within two weeks. Harry L. Bill, vice president, is in charge of operations, with Carl H. Becker in charge of sales and D. C. Bayne, secretary and treasurer.

The company reports orders on hand covering several months' production.

It is said the Apex Corp., whose plant has been taken by Saxon, has acquired the former plant of Flanders Mfg. Co. at Chelsea, Mich.

* * *

Wildman Getting Ready.

"You know what I did in building up Portage tires and tubes during the ten years I was president and general manager," begins a letter sent to former customers by W. W. Wildman, who withdrew from Portage Rubber Co. in 1919 and organized Wildman Rubber Co., Bay City, Mich., of which he is president. He states a large number of his old dealers have signed up to handle Wildman tires and tubes. An interesting folder of facts about the company and plant is enclosed. Production begins next autumn. The first unit's capacity will be 2500 tires and 5000 tubes per day. Capacity increase will not interfere with operation of any unit, and all equipment will be new and of latest design, which means the best quality of product.

* * *

Gray Motor Corp. Financing.

In connection with completion of financing of Gray Motor Corp., it is stated that John Kelsey, president of Kelsey Wheel Co., Detroit, and three other Detroiters, practically have underwritten it. The understanding is that these associates have backed a credit of $1,500,000 and that Kelsey personally has signed papers calling for an immediate contribution to its funds of between $500,000 and $700,000.

* * *

Pierce-Arrow-La Fayette Bond Plan.

As part of the proposed merger of the Pierce-Arrow and La Fayette companies, it is expected that in addition to exchange of stock there will be issued $10,000,000 or $12,000,000 of notes or bonds, to pay off Pierce-Arrow's bank loans, about $8,000,000, retire a small La Fayette bank debt and provide working capital. Pierce-Arrow's capitalization comprises $10,000,000 preferred 8 per cent stock and 350,000 no-par shares. There is no funded debt. La Fayette has outstanding $4,000,000 preferred 7 per cent stock and 40,000 no-par shares of common.

* * *

James is Hudson-Essex Ad. Manager.

Announcement is made of the appointment of William A. James as advertising manager of Hudson Motor Car Co. and Essex Motors, Detroit. Mr. James has been connected with both for some time, first in the sales and technical service departments, from which he was transferred to the advertising department about a year ago. Previous to his factory activities he was in the field as a retail salesman.

* * *

Back to Ordinary Climate.

Charles F. U. Kelly, sales manager of Quaker City Rubber Co., Philadelphia, returned to the East recently after three months spent in California in the interests of the company.

ROAD CLOSED

A Flare of Dim, Ineffective Light in All Directions, Giving No Warning of Danger Ahead

Diverting Wasted Upper Light Rays to the Road Ahead. A Considerable Increase in Light

A Perfect, White Light, Increased 60 to 80%, Concentrated on the Road Nearly Double Usual Distance and Width, Eliminating Glare

K-S *Anti-Glare* Light Booster

WILL INCREASE YOUR ROAD LIGHT
60% TO 80%

The upward light rays are trapped and utilized in the bottom of the reflector.

Eliminate the Glare. The upward rays being shut off, there is no glare.

Easily Attached to Any Head Light. No tools required.

Can Be Used With Plain Glass Lens. Will also increase light if used with patented lens.

Has No Contact With Light Bulb. Ample air space provided to prevent heating bulb.

Approved by Motor Vehicle Departments

$1.25 per set

Ask Your Dealer or Write Direct to

K-S MANUFACTURING CO.
409-411 W. Pico Street, Los Angeles, Cal.

Distributors for Pacific Coast
U. S. MANUFACTURERS SALES CO.
Los Angeles, Cal. Portland, Ore.

Patented Lens Alone — Ineffective Light Spread in all Directions. 50% of your light wasted

Patented Lens with Booster — Light Increased and Concentrated on the road, Length of Rays Increased

Plain Lens with Booster — Perfect Light. None Wasted. Rays Extended nearly double usual length

Culver is Dorris General Manager.

J. F. Culver has been elected general manager of Dorris Motor Car Company, St. Louis, Mo. He also will continue as secretary-treasurer.

Mr. Culver was born in Connellsville, Pa. When still a small boy, his family moved to Louisiana, Mo. His first position was addressing envelopes for the Stark Brothers Nurseries and Orchards Co. Later he became office manager, and was elected as one of the four directors. He went to St. Louis in 1917 and entered the Dorris Motor Car Co. in a minor position. Then he was made auditor and, in less than a year's time, was elected secretary and treasurer.

The other officers of the Dorris Co. are George P. Dorris, president, and Frank C. Thompson, first vice president. The directors are Messrs. Dorris, Thompson, Webster, Colburn, Parker Woods, Judge Jesse McDonald, Henry B. Krenning and George C. Griffith.

Mr. Culver succeeds Webster Colburn, who resigned as vice president and general manager, to devote himself to other business interests. By Mr. Colburn's resignation the industry loses one of its most active workers. He served this past year as chairman of the Safety Drivers' School, and is a member of the board of directors of the St. Louis Automobile Dealers' Association. He inaugurated the campaign for holding the national automobile show in St. Louis instead of Chicago. Mr. Colburn was born, reared and educated in Chattanooga, Tenn. His first job was on railroad construction work in the mountains of his native state, when he often rode the line for 50 miles a day. He went to St. Louis at the age of 20 and held a minor position in the old St. Louis Motor Carriage Co. In 1905 he helped in the organization of Dorris Motor Car Co., and soon afterward became its vice president and general manager. He leaves the Dorris Co. in better financial condition than it has been at any other time in its history.

* * *

Heads Maxwell-Chalmers in Canada.

The board of directors of Maxwell Motor Co. of Canada, Ltd., and Chalmers Motor Co. of Canada, Ltd., at a meeting in Windsor, Ont., elected John L. Hibbard president and general manager. Mr. Hibbard has assumed complete charge of operations of both companies.

Mr. Hibbard early saw the possibilities in the automobile field and associated himself with Studebaker, serving for a number of years as export sales manager. Later he was invited into the sales department of Cleveland Tractor Co., where his work won for him the position of president and managing director of the Cleveland Tractor Company of Canada, Ltd.

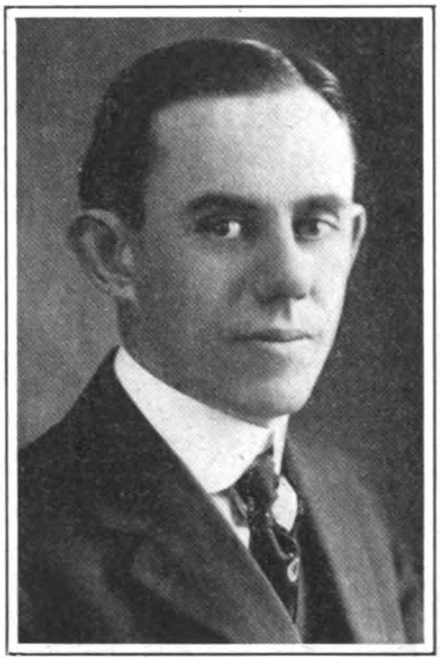
* * *

Peerless Outlook Pleasing.

R. H. Collins, president and general manager of Peerless Motor Car Co., Cleveland, is pleased with the way orders have increased since January 1. Volume grew weekly till, in the second week in March, sales were at highest level since May, 1920, when Peerless business was at its peak. Only twice in Peerless history, dating back to 1901, were the shipments of March, 1922, exceeded, and only slightly at that.

The company, like many others, had a net operating loss on 1921 business. The payment of $103,358 in interest on notes; $100,915 for decline in market price of commitments, $113,307 for extraordinary depreciation of past model and obsolete parts, and $16,983 discount on notes re-acquired, resulted in net loss of $103,665. Sales for the year ending December 31 totaled $12,055,904, compared with $14,919,065 in 1920.

Today there is ample working capital, as current assets are $7,065,665 and current liabilities only $625,682. Net current assets, $6,239,683, compared with $2,076,400, the remainder of $5,000,000 notes outstanding (comprising the funded debt), are in the ratio of 3 to 1. The company has $4,000,000 in cash and United States certificates of indebtedness.



J. F. CULVER.

Mr. Culver has been elected general manager of Dorris Motor Car Co., St. Louis, continuing also as secretary-treasurer. He succeeds Webster Colburn, who has resigned as vice president and general manager to attend to other interests.

* * *

Nash Breaks Record in April.

Nash Motors in April had the biggest month in its history, 18 per cent more cars being shipped than in April, 1921. The previous record month, August, 1920, was entirely eclipsed. C. B. Voorhis, vice president and director of sales of Nash Motors Co., says every effort consistent with careful production is being made to meet as nearly as possible the demand for Nash cars in May. "Frankly, though, we will not be able to supply the full demand, for we have faced an oversold condition, now, for the past two months.

"When we brought out our new line of cars the first of the year, the reception they would meet was apparent at the very outset. All previous records were broken at the New York and Chicago shows, as well as at most of the shows subsequently held in various cities throughout the country. With the opening of the spring season the pressure of orders became stronger until finally, some weeks ago, we reached the point where we were oversold.

"The first quarter of 1922 shows an increase of nearly 52 per cent over the similar period a year ago. This seems a certain indication that the public has placed its unqualified indorsement on our product."

* * *

Firestone Salesmen Optimistic.

Hundreds of Firestone salemen, branch managers and special representatives, at a recent meeting in Akron, reported optimistically on prospects in their various fields, embracing 80,000 dealers in 50,000 cities and towns.

At an exposition during the conference, one feature was a model tire dealer's store, showing the proper placing of outdoor signs, decoration of windows, display of merchandise and a properly balanced stock. Salesmen were given points to pass on to dealers, as to costs and other merchandising knowledge. Also, a course of study was given as to the history and development of the tire industry as a whole, and as to each Firestone product. At the general sessions well known men, including President H. S. Firestone, spoke, and salesmen gave their selling talks and told of results the conference was giving them. A reception at Mr. Firestone's home, Harbel Manor, closed the notable gathering.

* * *

Making Gears for Star and Durant.

New Process Gear Co., a subsidiary of Willys Corp., has been awarded a contract to manufacture differential sets for the $348 Star. It also is making gears for Durant cars, and is operating nights in some departments.

* * *

Production of 600 Rickenbacker cars for May was set by B. F. Everitt, president of that company.

OIL KING PISTON RINGS
JOBBERS and DISTRIBUTORS
Ask Us Why You Should Sell
Oil King Piston Rings
DYGERT & SIEMERS
Chamber of Commerce Bldg
Los Angeles, Cal.
Complete Satisfaction Guaranteed above all other Oil Rings

About General Motors Corp.

A book on General Motors Corp. has been issued by the New York Stock Exchange firm of Dominick & Dominick, treating at length practically all phases of the affairs of the huge concern. There is a complete analysis of its senior securities and the book is replete with statistics covering a series of years, indicating General Motors' growth and prosperity. The book shows the corporation's component units and the products turned out by each, this being the first time such a full presentation has been made public. This is further amplified in a chart which clearly indicates the corporate structure and shows the relationship of the various constituents to the parent body.

It is shown that General Motors Corporation since 1909 has turned out nearly 2,500,000 passenger and commercial cars, of which approximately 72 per cent are in use in this country; also that out of the 10,448,632 motor vehicles in the United States, one of every six is a G. M. C. product. Furthermore it is shown that in addition to manufacturing automobiles, the corporation is a producer of all classes of motor accessories and parts, farm tractors, trucks and implements, its various units being located at numerous points all over the United States, Canada, and England.

Dominick & Dominick have prepared the issue for free distribution and complimentary copies will be sent upon request.

* * *

Veteran Schwarzkopf Destitute.

Tom Moore, secretary of the Automobile Dealers' Association of New York City, in a letter recently to F. Ed. Spooner, Detroit, said: "E. E. Schwarzkopf (Schwartzy), who is one of the pioneers of our industry, was reported to be in most serious distress. I found that for three days he has been lying in bed without attention or food, broken in spirit and health. Immediate action was taken and he was removed to Roosevelt Hospital and there placed in a private room. At this writing the physicians have not diagnosed his physical ailment, due to the fact that I have suggested a history of the case be secured from St. Luke's Hospital, where some two years ago he underwent a major operation and for a long time hovered between life and death. I have been flooded with requests from all of his old friends who desire to rush to his aid, and if you feel so disposed I shall disburse any money toward his comfort, reporting the same to you. Schwartzy is really one of the old timers in the industry, and did much to promote its feeble steps in the old days, and the response to this call for help should be instantaneous. Old timers kick in."

* * *

Alexander Is Monroe Sales Head.

Harvey A. Alexander is announced as sales manager of the reorganized Monroe Automobile Co., Indianapolis, the sales plan of which is elimination of dealer and distributor and selling direct to users through Monroe service stations and an organization of Monroe factory salesmen. This plan will be worked out first in Indiana, and afterward in other states. The car will be sold with service already paid for up to a certain limit.

* * *

S. M. How Now with National.

S. M. How, one of the best known of the old timers, has joined forces with Harry Unwin, of National Motor Car & Vehicle Corp., Indianapolis, in a special sales capacity. Mr. How has more recently been with the Yellow Cab Mfg. Co., Chicago, and previous to that spent 12 years with Haynes Automobile Co., Kokomo, Ind., severing his connection as general sales manager of that company to join the Yellow Cab.

* * *

Increasing Forces in Jackson.

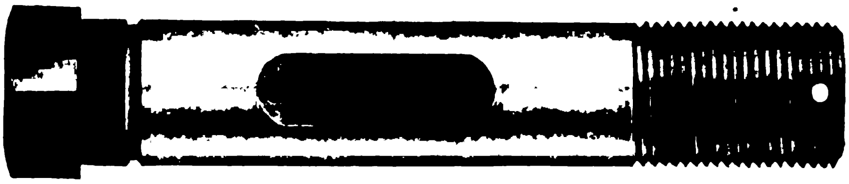
Employment in Jackson, Mich., increases steadily. Earl Motors has been taking on new men at 50 per day, as fast as machinery for capacity production can be arranged. The company is unable to keep up with orders and has about 1000 workers.

Hayes Wheel Co. is working on a 12 hour schedule in many departments.

* * *

Rumors float as to a Franklin branch factory in Flint, Mich.

satisfaction for Garage Men in handling



SECURITY SPRING BOLTS

You probably use lots of Spring Bolts in a year. Why not get *guaranteed bolts*—the Security line—and then *stay with them?*

They're actually better—manufactured from solid bar, of the highest grade carbon steel, heat-treated to provide a hard wearing surface and a tough core.

The thread accuracy, the cotter drilling, and the knurled underhead make the Security Spring Bolt a perfect replacement part.

Security Spring Bolts are equally effective for oil or grease lubrication. The head is tapped for one-eighth inch pipe thread, making it possible to use either grease or oil, as preferred. Bolt will take standard grease-cup or any of the grease-gun lubricating system attachments.

Our Special Chart makes it easy to order and maintain stock. Send for a free copy—it insures your getting *the right bolt for the right car.*

ORDER FROM YOUR JOBBER

SECURITY MANUFACTURING CO.

1047 West 16th St., Los Angeles, Calif.

Dickinson an Old Timer.

Fred S. Dickinson, president of the $2,000,000 newcomer, Dickinson Tire Corp., 220 West 19th St., New York, formation of which has been stated in Motor West, is a veteran dating from the very inception of the pneumatic tire in America. He was connected with A. Featherstone, manufacturer of Featherstone bicycles in Chicago, when that gentleman obtained American rights to the original pneumatic tire, the Dunlop, in the early '90s.

Mr. Dickinson is said to have cooperated with Louis D. ("Birdie") Munger in designing and manufacturing the first pneumatic tire made for motor cars. All other tires at that time were in reality but enlarged bicycle tires, and made without due regard to tractive and other stresses.

Mr. Dickinson is stated to have been first to see the need of the demountable rim, and assisted in making the first in use. The patents on this rim have been upheld in the United States courts as basic.

Mr. Dickinson long has been a successful manufacturer and is recognized as having a knowledge of tire construction second to none. In the invention of his cord tire machine there are embodied methods of cord tire construction quite different from the accepted practices. Means have been discovered to overcome features long known as defective. By the Dickinson method prime requisites are met—such as uniformity of tension and the positional lay of the individual cords in a fixed path of helicoid lines, so that every cord occupies the same relative position. In this, the Dickinson method differs from individual cord or "thread fabric" types, in which, he claims, no provision is made for attaining equality of tension in the laid cords or for maintaining such variable tension as sometimes is required. Mr. Dickinson claims among other things that imperfect tension creates a difference in action in a multiplicity of cords or threads and that, under the flexing frictional movements between the cords and the plies which they comprise, the result is minimized resiliency, and heat is generated, resulting in deterioration.

By the Dickinson method the time required to produce tires will be cut to a minimum. The machine has a capacity of 25 carcasses per hour, or 200 for the 8 hour day. Each machine, operated 8 hours per day for 250 days would make 50,000 carcasses, and as the machine is slow speed, light duty, it may be run 24 hours daily and so treble that output and turn out 150,000 tires per year's work of 250 days. One machine does the work of 50 men, eliminates waste, culls and seconds, economizes space, reduces overhead and reduces competition.

Prominent tire men of Europe and America have investigated this machine thoroughly, and one contract for a foreign country, it is stated, means a large fortune for the inventor. His idea is patented in all parts of the world. These patents are in three series, covering method, product and machine, and many other patents are pending. The preliminary contract made with European bankers will run, in royalties, over $500,000. The company does not sell the machines, which always remain its property, contracts calling for a royalty on every tire carcass made. Several American tire makers are said to be negotiating for use of the method, and active preparations also are being made to manufacture, the factory to be located in the East.

* * *

U. S. Rubber's Canadian Agency.

W. A. Eden has been elected president of Canadian Consolidated Rubber Co., Ltd., Montreal, the Canadian organization of the United States Rubber Co. He succeeds Charles B. Seger, president of United States Rubber Co., who becomes chairman of the board, to which body H. Stuart Hotchkiss, vice president of the United States Rubber Co., has been added to fill the vacancy caused by the death of Col. S. P. Colt.

G. P. ROGERS.

Mr. Rogers is general sales and advertising manager of Pyrene Mfg. Co., Newark, N. J., where, recently, it moved from three separate locations in New York City, now being housed efficiently in a modern, capacious building. To enlarge its service to its customers, the company has added to its long line of fire-fighting appliances a complete list of safety devices. It now offers every thing from No Smoking and Danger signs to gas masks, hand-drawn chemical engines and hand fire extinguishers.

* * *

U. S. Rubber Promotes Shugart.

George S. Shugart, one of the Morgan & Wright veterans, was made general manager of United States Tire Co. branches in 1918, and now is general manager. He was also made a vice president of the parent company, United States Rubber Co., at the recent meeting of directors.

* * *

Firestone says the average mileage of cars in three years is 17,000.

Nims to Be Chevrolet Editor.

C. Harry Nims, well known through his prominent connection with the advertising division of Hudson Motor Car Co., and later with Clydesdale Motor Truck Co., has become associated with the Chevrolet Motor Car Co., with headquarters in the General Motors Building, Detroit. Mr. Nims will have editorial charge of the three publications—Chevrolet Sales Speeder, which goes to dealers twice a month; Chevrolet Review, which goes to owners and prospects monthly; and Chevrolet Service Topics, which goes to dealers, service men and parts depots.

* * *

Reo's Canadian Factory.

Reo Motor Car Co., Lansing, Mich., has taken over the plant of Swedish Crucible Steel Corp., in Windsor, Ont., where it will locate its Canadian manufacturing branch. The work of moving equipment from the former St. Catherines plant is now under way. D. B. McCoy, former advertising manager of Reo, has been appointed manager of the Canadian branch. Assembling of vehicles will be under way within 90 days. The St. Catherines plant has not been in operation for about four years.

* * *

Now is Kokomo Automotive Mfg. Co.

Kokomo Automotive Mfg. Co. is the new name of what was formerly Automotive Accessories, Inc. It manufactures Kokomo windshield wings; automobile mirrors for both cars and trucks; curtain light glasses; and other mirror and glass specialties, for which Fulton Co., Milwaukee is the exclusive sales representative.

* * *

Better-Times Indication.

Stewart-Warner Speedometer Corp., Chicago, has increased its production from 4200 to 5130 units daily, and vacuum tank production from 4000 to 4800 units a day. This doubles figures of a year ago and compares favorably with the company's record output.

* * *

Dodge Promotions.

C. W. Matheson, who has been manager of Dodge Brothers since 1920, has been promoted to vice president in charge of sales. John A. Nichols, director of field operations, becomes general sales manager, and John H. Gordon, director of distribution.

* * *

Mr. and Mrs. Seiberling, Grangers.

C. W. Seiberling, brother of the president of Seiberling Rubber Co., Akron, is a farmer now, in Northfield Township. So is his wife. With many others they were initiated into the Macedonia Grange recently.

* * *

To Make Ford Bearings.

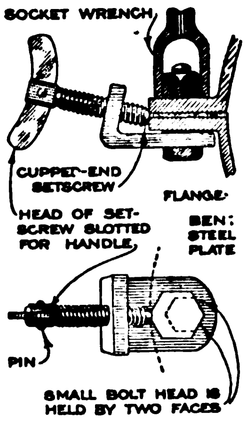
It is planned to make all ball and roller bearings for Ford at the plant at Green Island, between Albany and Troy, N. Y. The power house is expected to begin running June 1, and the plant by the end of summer.

Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question relating to automotive mechanical matters can be answered.

CRANKCASE BOLT HOLDER.

Bolts in crankcases, and in other flanged connections about a car, frequently require two wrenches and sometimes a second mechanic to tighten or loosen them. The illustration shows a tool which holds the bolt head firmly, and does away with the necessity for either an extra wrench or an extra mechanic. While it is desirable to have one of these tools for each size of bolt, the one shown can be used on practically any size that the hexagonal opening will go over. When the screw is set tightly against the flange, two sides of the hexagonal opening will be drawn against the corresponding sides of the bolt head and it will be held in place firmly. When using on undersize bolt heads the adjustment of the sides must be made before tightening the screw.


SOCKET WRENCH
CUPPED-END SETSCREW
FLANGE
HEAD OF SET-SCREW SLOTTED FOR HANDLE
BEN: STEEL PLATE
PIN
SMALL BOLT HEAD IS HELD BY TWO FACES

CRANKCASE BOLT HOLDER.

SQUEAKY BRAKES.

While testing a car out after repairing it, also test it for squeaky brakes. You can please the owner immensely by remedying this trouble. Ordinary brake squeaking can be remedied by applying kerosene to the brake lining with an oil gun. A mixture of soapstone and oil can also be used for this purpose, and is more lasting. However, when the noise is caused by rivets bearing against the brake drum, the only cure is the insertion of new rivets, sinking the heads below the surface of the brake lining.

CHEAP HAND CLEANER.

Saturate some sawdust with kerosene and keep it handy at the wash basin and you will find it a mighty good hand cleaner for the mechanics. This mixture should be kept in a closed metal container, to prevent possibility of fire from spontaneous combustion.

GREASE CUP TIPS.

Grease cups serve an extremely useful purpose in bearings that are exposed to dirt, because the grease is continually working out of the ends of the bearings, which tends to prevent the entrance of dirt. Care must be used to screw the cups down until the grease begins to show at the end of the bearings. Also, utmost care should be taken to keep the supply of cup grease clean; in well covered pails or other receptacles. Grease cups should be wiped off before they are unscrewed so that dirt will not be carried up inside.

KEEP GEARS ADJUSTED.

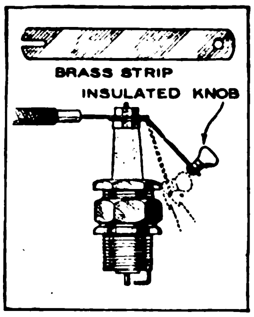
Much rear-end trouble may be avoided if the bevel gear and pinion are adjusted before they become too loose. It is known that spiral bevel gears must be in fairly good adjustment or they will wear rapidly and tooth breakage will follow. As most cars now have spiral bevel gears and pinions, adjusting them should be a matter of regular precaution.

HEAT HURTS TIRES.

Heat destroys solid tires just as it does pneumatics, taking the life out of the rubber. Heat is generated by the pounding of the load and friction against the roadbed when the car or truck is driven at excessive speed, even if the highway is smooth. Drive sanely to avoid permanent tire injury. Governors should be provided for reckless truck drivers.

INDIVIDUAL PLUG TESTER.

A spark plug tester that is applied to separate plugs as shown in the illustration eliminates the necessity of rooting around in the tool box for the screwdriver, the instrument commonly used for this purpose. The tester is made from spring brass as shown. One end is provided with a terminal for attachment beneath the binding nut on the plug, and on the other end is an insulated knob. When not in use the knob is held away from the plug, but when it is desired to make a test the end of the brass strip is pressed against the plug to be tested. By short-circuiting the plugs the missing one can be located and removed, and the tester placed on the new one.



INDIVIDUAL PLUG TESTER.

PANS FOR PARTS.

Many mechanics are saving time and worry by using small tin muffin pans for safekeeping of screws and other small parts.

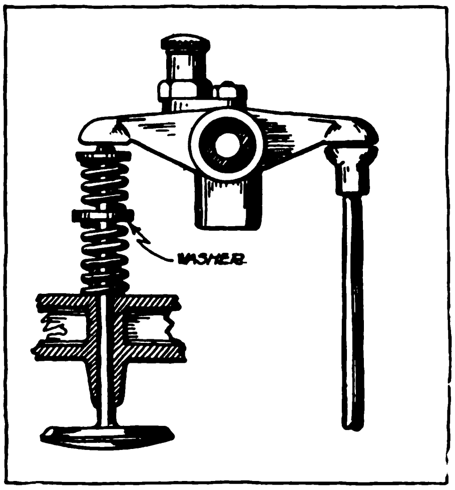
ELIMINATING NOISE.

It is largely because of rattling that the mud pan under the motor is being eliminated from many newer cars. You will be delightfully surprised at how trim and tight the old bus will feel if you adopt the following simple method: Drive a stout wooden stick (a foot or so in length, depending on make of car) between the sod pan and the crankcase, on both sides of the motor. Have the sticks wedged tightly, almost any way they will go in. The first time you hit some rough road you will wonder how you ever endured the now absent booming and rattling.

FOR BROKEN VALVE SPRING.

Editor Motor West: I have a car which breaks the valve springs, and have been caught on the road several times and had a very hard time getting in. It takes some time for me to order and get new valve springs. Can you suggest anything?—C. A. R., Albany, Ore.

Some cars have a square nose on the cam which causes the valves to open and close very abruptly, which possibly is the cause of your trouble. If you will carry several flat washers, with a hole the size of the valve, you can easily insert a washer between the broken ends of the spring as shown in the illustration. This will enable you to run until a new spring can be procured. There is no way to keep the spring from breaking.



FOR BROKEN VALVE SPRINGS.

SAVE OLD SPONGES.

You garage men and wash rack specialists who find your sponge bill amounting up every month can save quite a bit by taking the pieces of old, broken-up sponges and placing them inside a bag made of turkish toweling. The result will be practically as good as a new sponge and the bag will last indefinitely.

PROTECTS SURFACES.

Coating all the exposed metal surfaces of the car with several coats of lacquer or celluloid varnish protects them against tarnish and rust. The lacquer should be applied with a camel's hair brush after the metal has been polished very highly. There must be no trace of grease on the metal when it is lacquered.

GOOD TOW LINE HOOK.

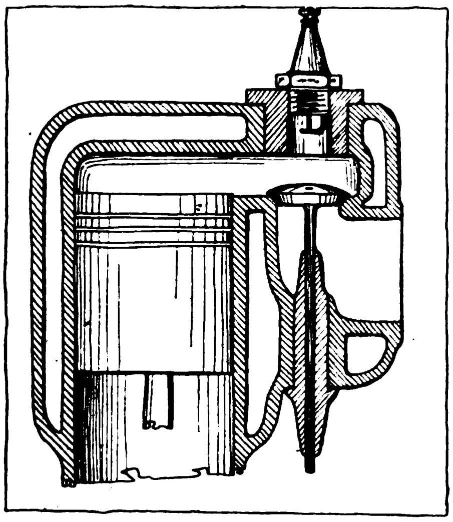
A convenient hook for the end of a tow line is made in the form of a corkscrew, which is coiled around the line. It is a matter of seconds to attach or detach this device and the hook will never drop off or cut the rope, as sometimes happens otherwise.

Motorists' Letter-Box

Motor West has access to a very complete collection of data, by means of which practically any question relating to automotive mechanical matters can be answered.

SPARK PLUG IN A POCKET.

Often a spark plug is pocketed in the cylinder. Then it will not fire properly as the points are in a pocket which remains filled with dead gas. There are many types of spark plugs. When buying one, be sure to get the proper length. If the engine is valve-in-head type, get the extra long plug, or long type. Never use the regular size plug for this type of engine, as it will not reach through the water jacket, but fires into a dead chamber. If the engine is an L or T head type it will use the regular size plug, which is very short. It is located in a port plug, or in case engine has removable head it is placed in a low place in the head, which allows the plug to reach through into the combustion chamber. The spark in this case should be directly over the intake valve or in the top of the combustion chamber.



SPARK PLUG IN A POCKET.

It is just as bad to use a long type plug when it is located over the valve as it is to use a regular type in a valve-in-head engine, as the long plug in this case will not be pocketed but will be struck by the valve when it opens and serious damage may result.

In buying plugs it is also necessary to notice the thread. All ½ inch plugs have a pipe thread and all ⅞ inch plugs have an S. A. E. thread. There is one other size having a metric thread, but this type is used very little.

ONE CYLINDER MISSES.

Editor Motor West: I have overhauled my car and as far as I can see it is in good condition, but it misses fire on one cylinder. It will not fire a shot at any time in this cylinder.—A. T. S., Berkeley, Calif.

There are just three things which would cause an engine to miss fire on one cylinder. First, no compression. This might be caused by a valve standing open, or any other bad leak into the cylinder. Second, a faulty spark plug. Third, no current coming to the plug. You should examine the cylinder and its wiring, and should be able to locate the trouble easily.

LEAK AROUND PORT PLUG.

Editor Motor West: I have a tractor which leaks badly around the port plug. The gaskets on these plugs are good and I think the leak is in the threads. How can I stop it?—B. K. C., Denver, Colo.

By mixing some powdered graphite with oil to form a thick paste, smearing the threads of the port plug and the threads in the block with this compound and then screwing the plug in tight, you can stop this leak. The graphite will squeeze into the low places, and, not being able to get out, will stop any leak. Never use white lead for this purpose. Graphite is a lubricant and the plug can be removed easily whenever necessary.

FORD CONNECTIONS.

Editor Motor West: I bought a Ford with an Everready direct-coupled starting device on it. The 12 volt storage battery had the positive terminal grounded. I had the battery charged and the battery man grounded the negative terminal. Which connection is right?—C. McC., Los Angeles.

The negative terminal should be grounded. Battery men usually know their business.

REBORING FORD BLOCKS.

Editor Motor West: I have a Ford truck which I intend overhauling this spring. Now what I want to know is this. Should I have a new block put in or should I have the old one rebored? Which will give the most power?—O. T., San Jose, Calif.

You better have the old block rebored as it will give you more power at less expense than putting in a new block.

CARBON REMOVER.

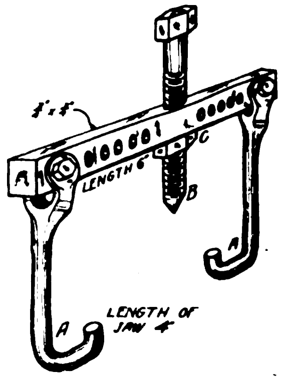
Editor Motor West: I am located in a territory where I get a lot of low grade fuel, and this naturally leaves a heavy carbon deposit in the cylinders, which makes it necessary for me to clean the carbon and grind valves every few weeks. Can I overcome this by using some form of carbon remover? If so, what do you recommend?—A. L. B., Tulsa, Okla.

There are a great many carbon removers which are very good. A carbon deposit in the combustion chamber is very hard to remove with chemicals, and about the only satisfactory method of removing it is to scrape it out or burn it out with oxygen. This of course requires special equipment. A garage usually will burn out carbon for a reasonable sum, and this is much quicker than scraping it out. If you will take a good carbon remover (which you can buy at any supply house), or even kerosene, and when the engine is hot, remove the spark plugs and put about three or four tablespoonsful in each cylinder and let the engine stand over night, some carbon will blow out through the exhaust and some will burn up. If you will repeat this every week it will keep your engine free from carbon a long time.

MAKING GEAR PULLER.

Editor Motor West: I have two trucks, one tractor and a touring car and I do my own repair work. I have no trouble, only with removing gears, and some of them are so tight I can not get them off. Can you give me any advice on how to remove such as are pressed on over keys? I haven't many tools and am handicapped in this way. I have a blacksmith shop and can make a great many tools, but I can't think of any arrangement for removing these gears.—H. C. N., Stockton, Calif.

In shops these gears usually are removed by means of a large press, but a small wear puller can be made easily by taking two pieces of steel about 6 inches long, ¾-inch wide and ¼-inch thick. Place a nut between the pieces at each end so they are held apart. Then put a bolt through at each end to hold them together. Next fix the exact center and drill a hole through an equal distance from the the center point on each side so that the inside of these holes will be 15/16-inch apart. Put a bolt or rivet through each one. Next take a ⅞ bolt about 6 inches long and pass it through between the two rivets in the center. The bolt should have a long thread, and a large nut should be placed on the bolt as shown in the illustration. The jaws may be made of steel about ½-inch square and shaped as shown. A hole is drilled in the end of the jaw. The jaw is then placed in position as shown and a pin passed through the hole. There are a number of holes in the beam which will allow the jaw to be set closer together when pulling different sized gears. When the jaws, A, are hooked over the gear, the bolt, B, which has been ground to a point, will rest in the center of the shaft on which the gear is mounted. When the nut, C, is screwed up on the bolt, the jaws, A, will pull the gear off. With this tool you will be able to pull almost any gear because it is of tremendous strength. By following the direction and referring to the illustration you will find this tool very easy to make.



MAKING A GEAR PULLER.

To determine correct pressure for any size tires, multiply the size by 20. A 3 inch tire should carry 60 pounds.

Overloading vehicles using solid tires causes more injury to the tires than anything else.

HOLDEN AIR SHOCK ABSORBERS

FOR ALL MAKES OF CARS

This Advertisement Is To You MR. DISTRIBUTOR and you MR. DEALER Do You Want a Winner?

RIDE ON AIR

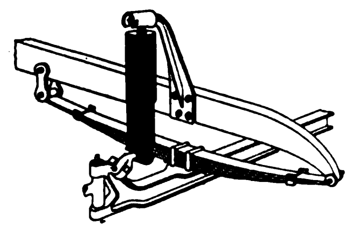
To Success with Holdens

Of course you know that the air principle of shock absorption is the scientifically correct and really only satisfactory one. But when you think AIR shock absorbers you think Pierce Arrow or Packard or Cadillac, don't you?
Why not think Ford or Dodge or Buick?
You can with Holdens in mind, for here are AIR shock absorbers that do what shock absorbers are supposed to do and sold at a price that fits a Ford pocket-book as well as a Pierce Arrow or anything between.
Think that over a bit. How many Ford or Dodge owners do you know who would install AIR shock absorbers if the price were right? It spells Q-U-A-N-T-I-T-Y sales. Quantity sales on liberal terms mean money in the bank. And that is what you want, isn't it?
Your territory may be open. Let's get together. HOLDEN.
N. B.—We are planning an extensive national advertising campaign.

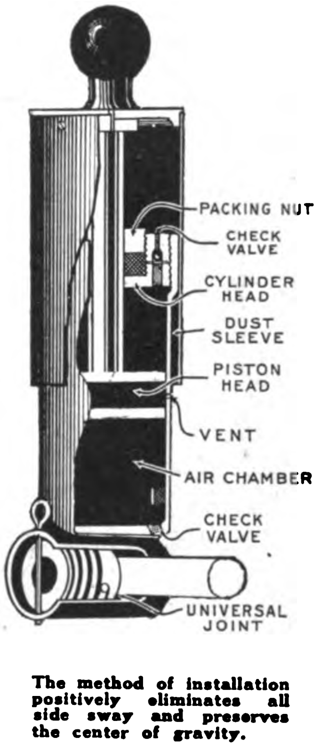
NO

OIL
SPRINGS
ADJUSTMENTS

INSURES SAFETY



Front Installation

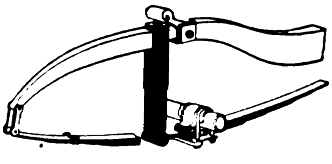


The method of installation positively eliminates all side sway and preserves the center of gravity.

NO

RATTLE
UPKEEP
MUTILATION OF CAR

PROMOTES COMFORT



Rear Installation

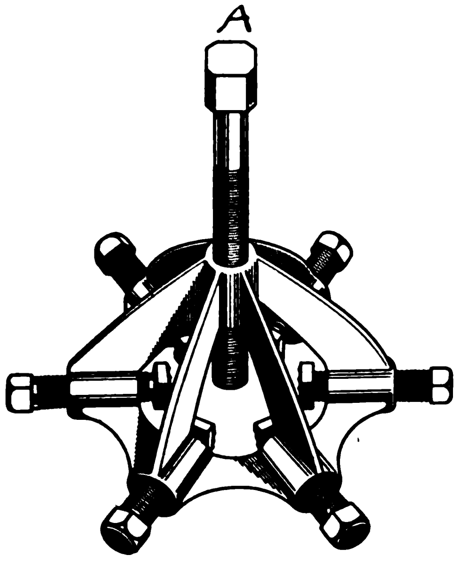
Holden AIR shock absorbers use air to absorb both the impact and rebound shock. They will carry overload regardless of spring capacity. They have less than one-half the parts used in any other AIR shock absorber, are absolutely fool and trouble proof and will outlast the life of the car.

HOLDEN SHOCK ABSORBER CO. LTD.
3105 SAN PABLO AVE. OAKLAND, CALIFORNIA.

New Things in the Accessories Field

A GREAT WHEEL PULLER.

The Thomason Universal wheel puller is being used in repair shops to remove wheels from practically every make of car. Tremendous clamping power is exerted on the hub, thus preventing stripping of threads. A steel ball imbedded at the point of the screw prevents dragging up of metal on axle when pressure is applied. A quick, clean job is certain with this wheel puller, which is right in line with other specialties manufactured by the Shepard-Thomason Co., Los Angeles.



KIMMERLE WHEEL PULLER.

ROCKING, SHOCKS, STOPPED.

Bilt-Rite shock absorbers for Ford cars are of efficient spring type, with castings of certified malleable iron, and bushings and bolts all of specially hardened steel. Springs are large, flexible, and operate so that on extreme riding shocks they are loaded to less than one-third of real capacity, according to Bilt-Rite Mfg. Co., Indianapolis. Along with effective amount of bearing surface, oil cups provide easy means of lubrication. On rebound the one element of the shock absorber is checked by a rocker stop, bringing the spring compression into play, to cushion and check the rebound. Pacific Bilt-Rite Co., 2000 University Ave., Berkeley, Calif., headed by M. B. Shriver, is Pacific Coast distributor.

PERFECTION PEDAL PADS.

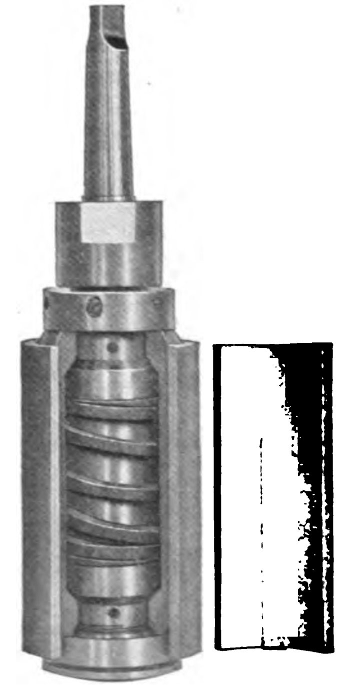
Perfection pedal pads are moulded from high grade solid rubber. The upper surface, with deep corrugated ribs, insures firm suction grip for the driver's foot. They are clamped on clutch, brake, or accelerator pedals, the pad being secured firmly in a cold rolled steel frame, attached to pedal with metal prongs, and bolts or drilling are unnecessary. The line, manufactured by Auto Pedal Pad Co., 318-20 West 52nd St., New York City, includes sizes for all makes of cars, and prices run from $1.25 to $1.50.

R & C LAPS.

R & C laps for refinishing automobile cylinders have been developed by R & C Lap Co., Inc., Davenport, Ia., to give cylinders, pistons and rings a finish as perfect as that obtained only by driving the car 5000 to 10,000 miles. It makes it unnecessary to "break in" the engine, which can be driven at any speed immediately after refinishing without scoring cylinders or pistons. These laps consist of a shank of floating type, an expanding device for adjusting the size, and for taking up wear of the soft metal shells which are charged with the abrasive, and the shells themselves, which are removable.

During the lapping process the diameter of lap is kept constant throughout its length, assuring a straight, perfectly round hole. It is easily adjusted for size by adjusting rings at top and bottom of tool, which are locked into position, and floating shank makes perfect alignment with hole unnecessary. Lap is used in a drill press, and in most cases engine block need not be clamped to table, making operation simple and easy.

The interchangeable and replaceable shells are in different thicknesses and give a large range of sizes. Equipped with them, every garage or repair shop owner can refinish cylinder blocks in his own establishment. Standard and special cylinder laps are priced at from $70 to $90.

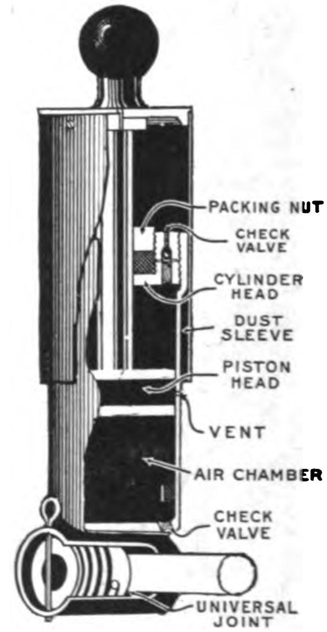


R & C CYLINDER LAP FOR REFINISHING AUTOMOBILE CYLINDERS.

HOLDEN SHOCK ABSORBER.

The principal features of excellence claimed for the Holden air shock absorber are that it compresses its own air in either the upper or lower chamber of its cylinder-like construction, by the movement of the car; that it carries any load regardless of spring capacity; has less than half the usual number of air compressor parts; will outlast the car, and requires no oiling; and adjusts itself automatically to the air resistance required by the shock.

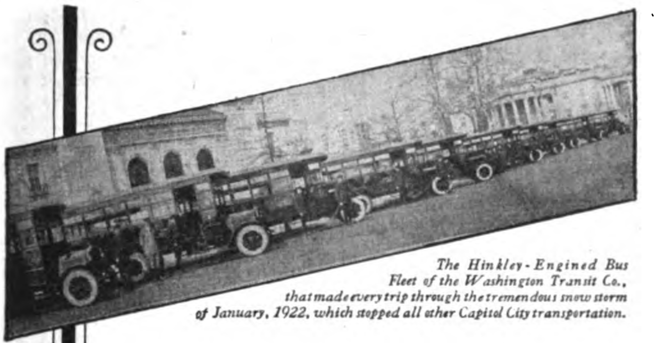
Any make of car, from Ford to Pierce-Arrow, may be equipped with it, without mutilation of car parts. It does not rely upon a vacuum to retard up-thrust, but uses compression of air for both impact and rebound. According to Holden Shock Absorber Co., Ltd., 3105 San Pablo Ave., Oakland, Calif., it is the only pneumatic shock absorber which absorbs rebound shock by compressed air only. On smooth roads it is non-resisting, and the car springs function efficiently, without interference from the shock absorbers. Light spring action simply moves the piston head in the cylinder between upper and lower air chambers, and the Holden develops a soft, moderate cushion which greatly minimizes vibration and assists the springs by providing well-proportioned air cushions at the point of impact for each spring. Dunham & Middleton, 1037 Monadnock Building, San Francisco, are California distributors.



HOLDEN SHOCK ABSORBER.

Lem Loosehead says: One o' th' oftenest newspaper headings I see is **"May Tax Gasoline"—fer this, that er' the other thing.**

If used in town it's a bus; if between towns, a stage.



The Hinkley-Engined Bus Fleet of the Washington Transit Co., that made every trip through the tremendous snow storm of January, 1922, which stopped all other Capitol City transportation.

Prepared

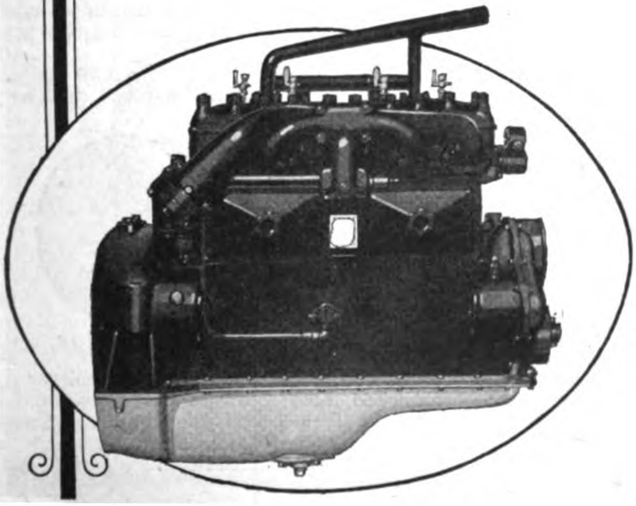
New standards of heavy-duty Speed, Acceleration and Reserve Power, demanded by Bus Service, again emphasize the wide gap between antique motive equipment and Hinkley Heavy-Duty Automotive Engines.

HINKLEY
HEAVY DUTY AUTOMOTIVE
ENGINES

For these are Modern Engines, designed and built to meet the rigorous demands of Modern Service.

In a full line of models, they yield to owners of Bus and Truck equipment alike, that full measure of unit miles per dollar to which their investment in modern haulage entitles them.

HINKLEY MOTORS INCORPORATED
Detroit



LEATHER ZAPON CLOTH

The upholstery that is refined

Send for samples showing the ZAPON brands—Muleskin, Broncho and Mustang—that are made especially for fine automobile upholstery and California Top Work

ZAPON LEATHER CLOTH COMPANY
200 Fifth Ave., New York
Branches: Chicago, Detroit, Los Angeles, St. Louis

AN ELECTRIC OILING SYSTEM.

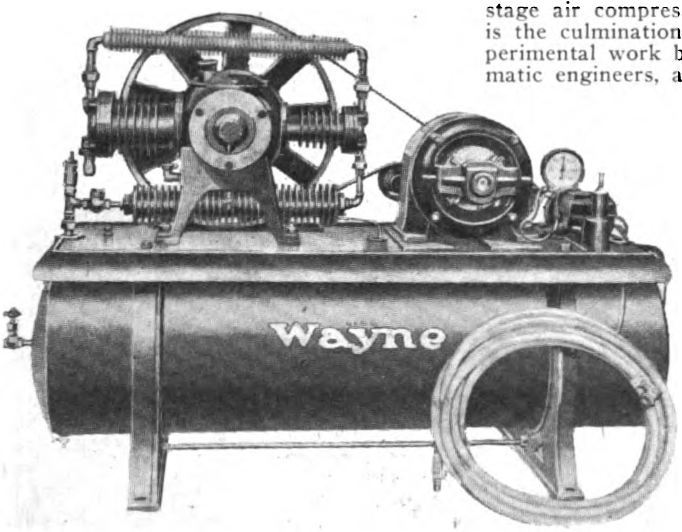
The McClure electric oiling system is a California invention for providing lubrication for every part of the chassis by merely pressing a control button on the steering column. It oils the spring bolts, shackles, steering knuckles, brake rods, and all open bearings, and completely abolishes the disagreeable task of crawling under the car to get at hard-to-reach spots, according to the makers.

Pushing control button forces a definite quantity of oil into every bearing and part needing lubrication, without trouble, waste of oil, or loss of time. Simple in construction, McClure oil cups contain a small piston or ejector operated by current carried from the battery through ammeter and switch along a single wire connected to the cups. Only a slight electrical impulse is needed to operate the small electric oil pump, and a measured quantity of oil is forced into bearings each time control button is pressed. The pump, small though it is, gives sufficient pressure to force oil entirely through bearings if control button is pressed a number of times in succession. No oil can leave cup unless control button is operated, and waste of lubricant is positively prevented.

To keep all points thoroughly lubricated it is only necessary to press button every other day for average city driving, and on lengthy touring trips every 150 or 200 miles. Each cup holds about 60 charges of oil, each charge sufficient for one oiling. Refilling cups is simple, only needed every 5000 miles. Oiling a car every other day for city driving gives 60 days' service with one filling. The manufacturer, McClure Electric Oil System, 871 O'Farrell St., San Francisco, guarantees its product unconditionally.

SMOOTH-ON IRON CEMENT.

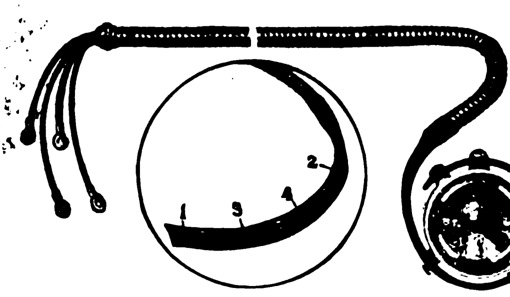
Smooth-On Iron Cement No. 1 is manufactured by Smooth-On Mfg. Co., 570-74 Communipaw Ave., Jersey City, N. J., for quick and permanent repair of automobile radiators, water jackets, pumps, and all types of automotive and other castings. With water, to make a putty or dough, it is applied to the crack or porous place, tamped in with light blows from a hammer until it fills the crack, and then allowed to set hard like iron, when the repaired part is ready for use. In repairing radiators, the Smooth-On compound is mixed with water to form a very stiff putty, then rolled into a small ball in the hand and applied firmly to the leak, stopping it instantly. The manufacturer will furnish a 32-page booklet, showing many Smooth-On uses, upon request.



NEW WAYNE AIR-COOLED TWO-STAGE AIR COMPRESSOR.

PREVENTS POOR IGNITION.

The Popular timer wire assembly for Ford cars, manufactured by Grigsby-Grunow-Hinds Co., 906 West Lake St., Chicago, has been put on the market as a remedy against poor ignition caused by oil, water and dirt breaking down the insulation of the Ford timer connecting wires. The assembly includes a flexible oil and waterproof metal hose enclosing four "new code" insulated wires, approved by the 250-volt inspection of Underwriters' Laboratories, and the usual spark coil terminals at one end. At timer end, cords are enclosed in fabric, and wires are permanently connected at the factory to eyelet terminals spaced to fit timer terminal studs. Fabric is treated and sealed by a special chemical process, making it proof against oil, water, or dirt. Guaranteed for one year, and sold at $1.50.



POPULAR TIMER WIRE ASSEMBLY.

WAYNE AIR COMPRESSOR.

Wayne Tank & Pump Co., Fort Wayne, Ind., especially well known in the garage and service station field for its oil and gasoline storage systems, has placed the new Wayne horizontal air-cooled two-stage air compressor on the market. It is the culmination of many years of experimental work by the company's pneumatic engineers, and is designed for filling stations, service stations, garages, tire shops, factories, engine cleaning, upholstery cleaning, spraying outfits, etc.

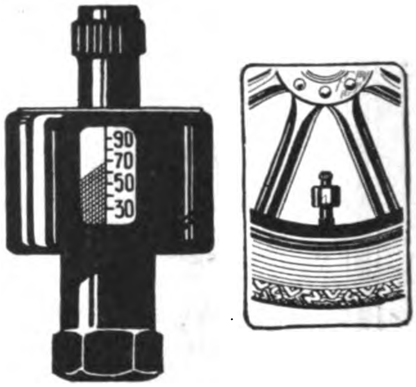
There are five models. The two-stage arrangement takes care of extreme temperatures generated in compressing air to pressures necessary for tire inflation by compressing the air once, cooling it, compressing it again, and cooling it again before delivery into receiver. The compressor illustrated is typical. It includes compressor, made up of oil gauge, check valve, automatic drain, fan blade, fly wheel, aluminum intercooler, and plates, belted to a ¾ horsepower motor, lightweight automatic idler belt, automatic control with automatic pressure and moisture unloader, 14x48 brazed tank for 200 pounds working pressure, all mounted on a substantial frame, and accompanied by 25 feet of special air hose and fittings. Efficiency better than 70 per cent is shown by each machine.

TRACTOR GEAR SHIELD.

Ironsides Tractor Gear Shield is the appropriate name for the high grade gear lubricant manufactured by Ironsides Co., Columbus, O., because it fulfills the first principle of efficient lubrication by softening the otherwise destructive contact of engine gears upon each other with a durable lubricating deposit on their working surfaces. In farm and road tractors lubrication requirements are unusually severe, and Tractor Gear Shield is the product of nearly 30 years' research carried on by Ironsides Co., which also manufactures automobile gear oil, machine belt oil, journal and bearing cup grease, and automobile soaps. Graf Sales Co., San Francisco, is distributor of Shield products on the Pacific Coast.

AERO AIR METER.

Aero Mfg. Co., 1412 Wrightwood Ave., Chicago, has perfected the Aero air meter, for use on all cars, to permit the motorist to tell at a glance what pressure is in each tire. This is an individual meter for each tire. It is screwed permanently on the valve stem and stays there as long as tire is in use. On its face is a small indicator that tells pound air pressure. Air is pumped through meter, which has a non-leaking valve in the end of it. A complete set of four for any car costs $10.

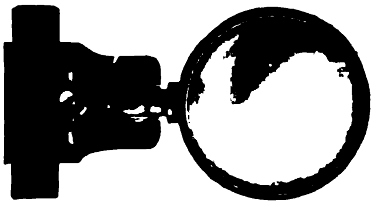


AERO AIR METER.

ROFFY TELE-VISION MIRROR.

The Roffy Tele-Vision mirror has been developed from crystal-clear, optical glass, ground and polished to a formula similar to that for curvature of toric eyeglasses, according to Standard Corp., Columbus, O. Grinding is done on automatic spectacle grinding machines, which produce about 5000 lenses a day, and reduces costs to about one-fifth that of the old processes.

Objects 500 feet distant back of the car can be seen with a distinctness that only a ground lens permits. This mirror is mounted on a vibrationless metal holder with a ball universal joint, brass bearings, and cold rolled steel clamp, making a highly attractive addition to the car. Price $2.



ROFFY TELE-VISION MIRROR.

PIONEER THE HANDY COMPACT LUGGAGE CARRIER

Loosen Two Thumb Screws and

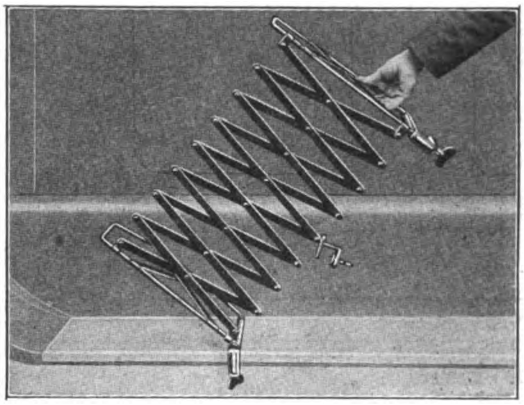
The Pioneer is always handy—always ready for instant use. Never in the way when folded down.

Cloth bag is provided for protection when carrier is put under the seat.

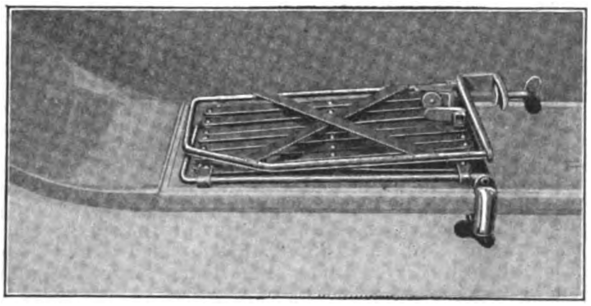
Drop forged construction and high carbon (40-50) steel fence make it unusually strong and substantial.

End gates 10¾″ wide, with crossed slats, firmly attached.

For utmost convenience, serviceablity and strength no other carrier will do.



Fold Down



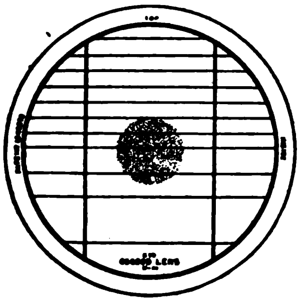
Flat on Running Board

In corrugated fibre board container it can be shipped 500 miles or more without repacking.

Weight Carrier only, 10¾ lbs.
Packed, 13 lbs.

LIST PRICE—$3.50 EACH

Manufactured by
The Brewer-Titchener Corp.
CORTLAND, N. Y.
Pioneer Auto Mirrors
Mays Cotter Pin Pullers

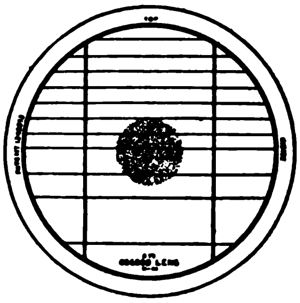


Safety

With Osgood Lenses on your car you'll drive in safety.

For Osgood Lenses give the best driving light, and they are legal everywhere.

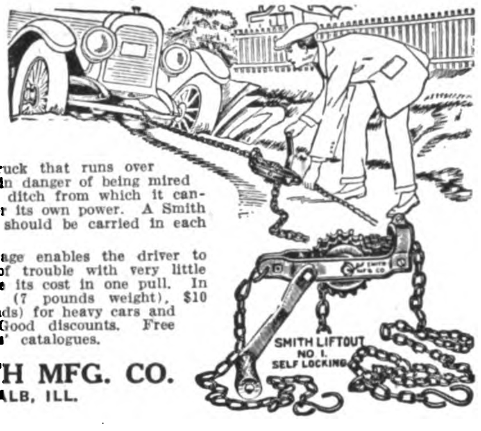
Manufactured by
OSGOOD LENS & SUPPLY CO.
Chicago



OSGOOD LENS

LICENSED UNDER CLARK PATENTS

FOR SALE BY BEST DEALERS

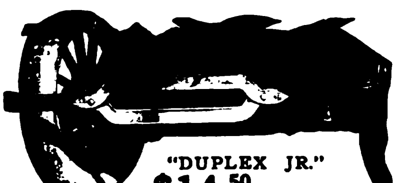


THE
SMITH
LIFT OUT
Car Puller

Every car and truck that runs over country roads is in danger of being mired or of going into a ditch from which it cannot pull itself under its own power. A Smith Liftout Car Puller should be carried in each such car or truck.

Its enormous leverage enables the driver to pull his car out of trouble with very little effort. It will save its cost in one pull. In two sizes: No. 1 (7 pounds weight), $10 list; No. 2 (7 pounds) for heavy cars and trucks $20 list. Good discounts. Free electros for jobbers' catalogues.

C. F. SMITH MFG. CO.
DE KALB, ILL.



NEW ERA
BUMPERS
BUILD
TRADE

"DUPLEX JR."
$14.50 In Black
Nickel $2 Extra

There's a stylish look about NEW ERA Bumpers that the motorist won't overlook. Show him the double bars that give double strength. Tell him of our permanent guarantee. Quote him our lower prices. Make a leader of New Eras and you will get the bumper trade and other business as well.

Write for new catalog

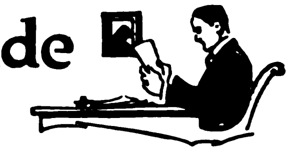
NEW ERA SPRING & SPECIALTY CO.
73 Cottage Grove Ave. Grand Rapids, Mich.
GRAF SALES CO., Williams Bldg., San Francisco, Calif.

GRAMM
PIONEER
MOTOR TRUCK
LIMA, OHIO, U.S.A.

"The Recognized Standard of Quality"
A complete line from Speed Truck to 6 ton.
All attractively priced. Unusual selling features.
Strong dealer helps. Write for territory, discounts, etc.
THE GRAMM-BERNSTEIN MOTOR TRUCK CO.,
Lima, Ohio, U. S. A.

MORELAND
MOTOR TRUCKS
Built on Honor in the West and for the West
they are superior under its varied
and rigorous conditions.
Powerful :: Dependable :: Economical
MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA
BEST FOR THE WEST

Western Trade Notes



San Francisco, Cal.—Bert Latham, Inc., Stutz car dealer, has been incorporated for $10,000 capital stock by M. F. Pimental, H. B. Kennedy and G. Fauth.—J. P. Bell & Co., dealers in automotive equipment, have located in new quarters in Call Bldg., 74 New Montgomery St.—Don Lee, Inc., Cadillac agency, have been authorized to sell 11,500 shares of stock to Don Lee in exchange for business heretofore conducted by him as an individual.—States Automotive Service Corp., capital stock $1,000,000, has been formed by H. W. Calhoun, V. L. Maxam, A. T. Salveson.—Auto Sun Mfg. Co., capital stock $325,000, has been formed by A. E. Larson, E. H. Brown, Oliver L. Johnson.—The Ambassador Garage, of two stories, and to be the largest garage on Pine St., will be built on Pine east of Van Ness Ave. and has been leased by Charles J. Evans and Fred A. Busse, formerly of Palace Garage.—Toft & Clement have opened an Exide battery station in the Richmond district; H. J. Toft was three years superintendent of the Exide branch in San Francisco.

Oakland, Cal.—Oakland Auto Palace Sales Co., capital stock $250,000 has been formed by Harvey P. Wellman, Arthur Ramage, M. W. Brown.—Milo A. Baker, 4141 Broadway, has opened an official service station for Schebler carburetors in Alameda and Contra Costa Counties.—Motorcar Electrical Co., 2324 Broadway, will handle Rayfield carburetor service in two counties.—Airle Mfg. Co., capital stock $50,000, has been formed by L. E. Hawk, G. E. Roy, S. M. Morris, and others, to manufacture accessories.—Oakland Garage, Inc., has been incorporated with $50,000 stock by J. E. and T. H. Lloyd, Vance McClymonds.

Berkeley, Cal.—A. W. Marr, formerly in the radiator repair business in Oakland, has opened a new shop here, 2055 University Ave., under the name Marr Welding & Brazing Works.

Pittsburg, Cal.—L. Blystone has bought the interest of his partner, I. Johnson, in B & J Tire Service.

Niles, Cal.—Stebbins Motor Sales Co. has been bought by Sid Holman, former department head with Chevrolet Motor Co., Oakland.

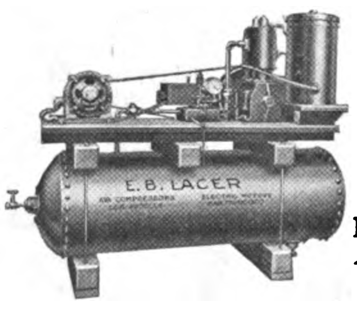
Byron, Cal.—Charles Wightman of Byron Garage, Studebaker agency, will erect a $6000 2 story garage on Main St.

San Jose, Cal.—J. E. Sloan, Buick car and White truck dealer, has located in his fine new garage, 500 S. First St.

Morgan Hill, Cal.—F. M. Brown and K. H. McCoat, forming Brown & McCoat, have taken the Reo car and truck agencies here.

Gilroy, Cal.—The old Highway Garage, 6th and Monterey Sts., will be torn down and a new garage erected, costing $25,000.

Santa Cruz, Cal.—Marks & Leonart, Buick dealers, have moved to new and larger sales quarters, 41 Pacific Ave.—C. E. Dowling has bought his former business at Front and Cooper Sts., handling oils, tires and accessories.—T. W. Thompson, former owner of Avenue Garage, has opened a service station, 224 Front, handling tires, oil and accessories.—Ebert Motor Co., Ray T. Ebert manager, Chandler and Cleveland agency, has added the Durant car.—Santa Cruz Auto Sales Co., headed by R. W. Plyler, 15 Walnut Ave., has taken the Chalmers agency for this county.—Ebert's Garage, 409 Soquel Ave., has been opened by Noe & Gulvin.



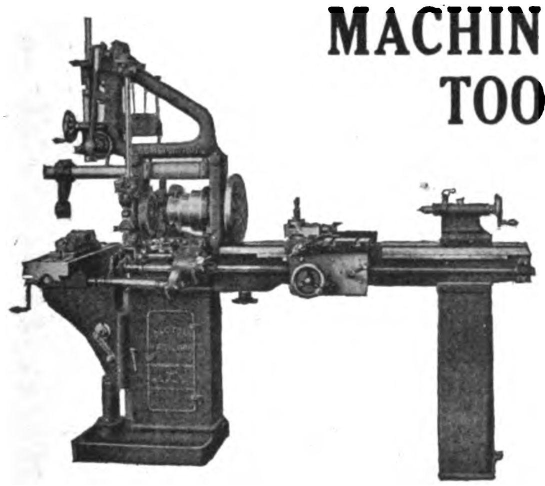
High
Pressures
Big Volumes

IS THE CALL
TODAY

If it is Compressed
Air 1 to 80 cu. ft.
of air per min.

See E. B. LACER
Air Compressors Electric Motors
Los Angeles San Francisco, Cal.
1224 East 8th St. 401 Van Ness Ave.

DALTON COMBINATION MACHINE TOOL



For Turning, Boring, Horizontal and Vertical Milling, Drilling, Tapping and Reaming.

Saves Power and Space.

SMITH-BOOTH-USHER CO.

Machinery, Industrial and Construction Equipment, Supplies

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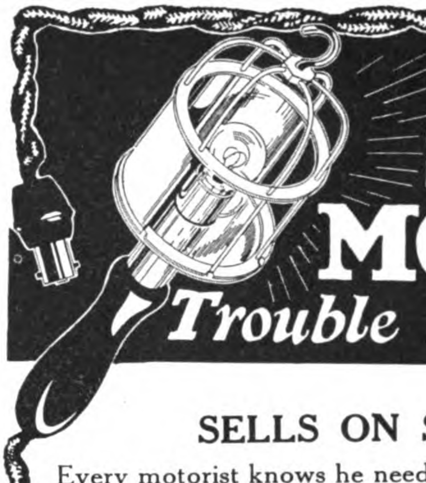


SEE MORE *Trouble* LAMP

SELLS ON SIGHT!

Every motorist knows he needs a light to work on the road at night—changing tires, looking for engine trouble, and so on. Show him the SEE MORE Trouble Lamp and tell him the price is $2.75. You will make a sale nine times out of ten.

Other dealers are doing big business! Are you?. A handsome lamp, with strong reflectors, 10 feet of cord, plug to slip in dash light, and a handy hook to hang lamp wherever needed! SEE MORE Trouble Lamp is a winner with the trade. Write at once for dealer proposition to

Davis Radio Signal Co., Inc.
Highland Ave., Hollywood, Cal.

DENBY
MOTOR TRUCKS

REDUCED PRICES

Effective Jan. 1, 1922

	Was	Now
Model 31, ¾-1¼ ton Speedster	$1625	**$1485**
Model 33, 1½-2 ton	2300	**2145**
(Pneumatic tires used on above models)		
Model 34, 2 ton	2600	**2395**
Model 35, 2½-3 ton	....	**2795**
Model 27, 4 ton	4200	**3895**
Model 210, 5 ton	4850	**4295**
Model 214, 7 ton	5500	**4945**

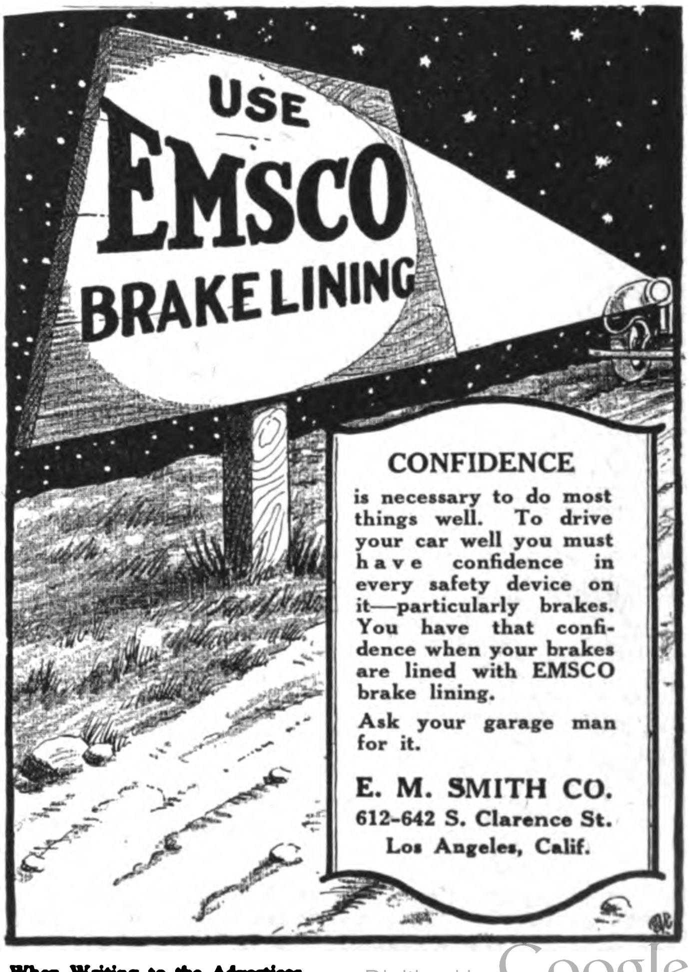
F. O. B., Detroit, chassis with seat

With rock bottom truck and service prices, the Denby line offers a very desirable factory connection to live dealers.

Write or wire for full details

LETS TALK BUSINESS AND GET BUSY

Denby Motor Truck Company
Detroit

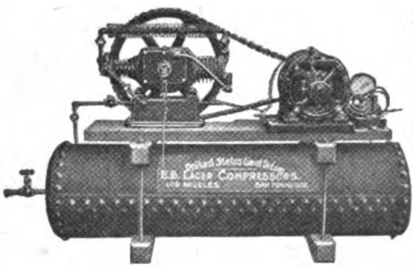


CONFIDENCE

is necessary to do most things well. To drive your car well you must have confidence in every safety device on it—particularly brakes. You have that confidence when your brakes are lined with EMSCO brake lining.

Ask your garage man for it.

E. M. SMITH CO.
612-642 S. Clarence St.
Los Angeles, Calif.



The same reliable **U. S. Compressors.**

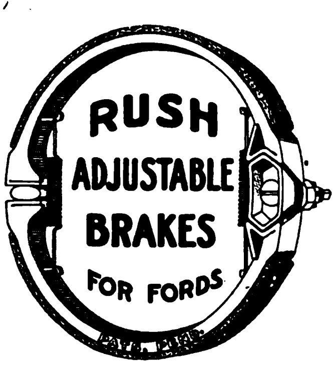
Reliable **10** years **ago.**

More **reliable** Today.

**Many copies appear in the market but only one original.
The best with patented features**

E. B. LACER

Air Compressors **Electric Motors**
Los Angeles **San Francisco, Cal.**
1224 East 8th St. **401 Van Ness Ave.**



P-D-Q
TRADE MARK
VALVE GRINDING COMPOUND
THE FASTEST ABRASIVE KNOWN
Unequaled for Cylinder Lapping
WALTER W. BIDDICK
DISTRIBUTOR
LOS ANGELES SAN FRANCISCO

All That the Name Implies

A Real Time Saver

4-oz. cans...$ .50
8-oz. cans... 1.00

**Order from your jobber, or
WALTER W. BIDDICK, Distributor**
1318 South Figueroa St. **Los Angeles**

WANTED!

A Permanent Job on Your Ford Car

Applicants are the ARG Auxiliary Spring and the ARG Fender Braces. They come highly recommended by thousands of Ford owners for whom they have cut down depreciation, added to riding comfort and prolonged the car's life.

The ARG Auxiliary Spring is a combination front spring protector and shock absorber, costing only $4.00. ARG Fender Braces, either front or rear, cost $2.50 and definitely end fenders cutting tires and rattling. Put these competent, reliable accessories to work on your commercial or passenger car *today!*

Be sure to ask your dealer for ARG accessories by name. ARG accessories must make good or we will.

ARG AUXILIARY SPRING CO. *Mfrs.* Birmingham, Alabama

SOUTHERN ENGRAVING AND COLORTYPE CO.

Our Artisans and Equipment Rank Second to None West of Chicago

ALL WORK GUARANTEED

Photo Engravings

SOUTHERN ENGRAVING & COLORTYPE CO.
Phone 11046 LOS ANGELES 111 West 3rd

Los Angeles, Cal.—Leon T. Shettler Co., distributor of Rickenbacker cars, has been formed with $250,000 capital stock by Leon T. Shettler, Frances G. and G. C. DeGarmo.—Harry W. Hahn Mfg. Co. will have a 1 story brick building erected for it, 627-29 S. San Pedro St., for its automotive accessory, tool and novelty manufacturing business.—Nelson & Price, tire distributors, have opened a branch store on Cahuenga Ave. to serve the Hollywood district.—F. L. Dickinson Garage, 1650 Western Ave., will be more than doubled in floor space by building of a new addition, 50x90 feet.—Langner Mfg. Co. has been incorporated for $100,000 by J. W. Lawrence, Victor Langner, J. N. Carey.—Union Motors, Inc., Maxwell distributors, have been incorporated for $10,000 by P. H. Greer, A. C. Robbins, George Pearson, Jr.—Hackett Tire & Battery Co. will be opened soon in a new building, 603 E. 4th St. by W. F. Hackett.

Santa Monica, Cal.—Western Auto Supply Co. has opened a branch store, 1418 2nd St.

Redondo Beach, Cal.—Rahm, Getman & Rahm have opened an Overland and Willys-Knight agency on North Catalina St.

Long Beach, Cal.—T. L. Cough and E. L. Watton have opened at 25 American Ave. to handle Mohawk tires and Sinclair lubricants.—E. A. Leveraux and A. J. Taylor have opened a Velie agency, 330 E. 4th St.—Long Beach Rubber Co. has leased a modern steel and concrete building to be erected on Locust Ave. adjoining Glenn E. Thomas Co.

Pasadena, Cal.—A. J. Mayer, 362 W. Colorado St., has taken the Columbia car agency.—Ralph Hamlin, Inc., branch of the Los Angeles concern of same name, has been made Pasadena agency for Reo cars and trucks.

Covina, Cal.—Sam's Garage has been opened at Citrus and Orange Sts. by Sam Leebrick.

Monrovia, Cal.—A. J. Menegay has opened a radiator, fender and body repair and rebuilding shop in Drive Inn Garage on East Orange Ave.

El Monte, Cal.—W. F. Kassebaum has opened a Studebaker agency in Mission Garage.

Arcadia, Cal.—E. J. Tucker has bought White Garage on Huntington Drive from T. A. Brady.

Glendora, Cal.—Label & Webber have bought Glendora Garage from Hugh Hefferman.

Ontario, Cal.—J. E. Mackey has bought one half interest in Sturgell Auto Supply Co. on West A St. from B. Sturgell.

Beaumont, Cal.—Carl R. Brown has bought Hitchcock Garage.

Santa Ana, Cal.—J. T. Van Why of Santa Ana Electric Garage has bought ground at 5th and French Sts. and will erect a new garage for his business.

San Diego, Cal.—P. W. Gavin Co., Front and B Sts., has taken Diamond tire distribution for San Diego County.—James P. Laursen, Goodyear tire dealer, has moved to a larger store, 7th and Market Sts.—Lankford-Fetty Motor Car Co., Velie and Westcott dealer, has moved to 2nd and B Sts.—H. E. Gressler has been made exclusive Goodrich tire traveling representative in the San Diego territory.

El Cajon, Cal.—El Cajon Machine Co. has taken the Durant agency for El Cajon, La Mesa, Lemon Grove and Lakeside.

Anaconda, Mont.—Automobile dealers here and local business houses held a successful automotive and business show, April 25-28, in Shrine Temple Bldg.

Tucson, Ariz.—Babbitt's Tire Service Agency, 187 S. Stone St., has been opened by Frank O'Reilly.

Everett, Wash.—Everett Ford Agency has leased a new brick garage to be built on Main St.

Spokane, Wash.—R. C. Lyon and H. B. Page have bought Central Garage.

SCANDINAVIA

Trade Mark Registered in U. S. Patent Office.

BRAKE LINING FOR FORD CARS

SCANDINAVIA is woven from selected, long staple cotton on looms especially designed for FORD brake and transmission lining. Weighs 25 to 35 per cent more than other linings—which means more yarn, more body and more actual value.

Send for illustrated booklet and our Attractive Jobber or Dealer Proposition

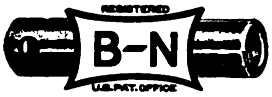
SCANDINAVIA BELTING CO.
106-108 Reade St., New York City
Branches—Atlanta, Cleveland, Los Angeles, Portland, Boston, Chicago, Easton, Pa., Pittsburgh, San Francisco

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

CYLINDER REGRINDING CYLINDER REGRINDING

Perfected **Piston Pins**



B—N Pins are hardened by a perfected method of heat treatment which combines both hardness and toughness. That is why B—N Pins make the most satisfactory repairs and give the most satisfactory service.

Quick Repair Jobs With B—N Pins

24-hour service from these centrally located jobbers—

Davenport, Ia. Sieg Company	**Portland, Ore.** Ray Daley
Dubuque, Ia. Midwest Auto Supply Co.	**San Francisco, Cal.** Bryce Howatson Weinstock-Nichols Co.
Los Angeles, Cal. Weinstock-Nichols Co.	**Topeka, Kas.** W. A. L. Thompson Hdwe. Co.
Oakland, Cal. Weinstock-Nichols Co.	**Waco, Texas** Archenhold Auto Supply Co.
Oklahoma City, Okla. Sharp Auto Supply Co.	**Wichita, Kas.** Simmons Hardware Co.
Omaha, Neb. Sunderland Machinery & Supply Co.	

BURGESS-NORTON MFG. CO.
526-548 Peyton St. Dept. D. GENEVA, ILL.

VALVES

CHROME
METCO
VANADIUM
VALVES

A better finished Valve accurately machined from Chrome Vanadium steel. Heads designed to prevent warping and burning. A quality Valve at a popular price.

Standard and 1-64 inch oversize stems for all makes of cars and trucks carried in stock.

MOTORS, EQUIPMENT & TRACTOR CO.
Phone Pico 3201
1341 So. Hope St. Los Angeles

PUBLICATIONS

The
VETERANS' JOURNAL
an independent weekly newspaper
US

DEALERS, GARAGEMEN and EMPLOYEES

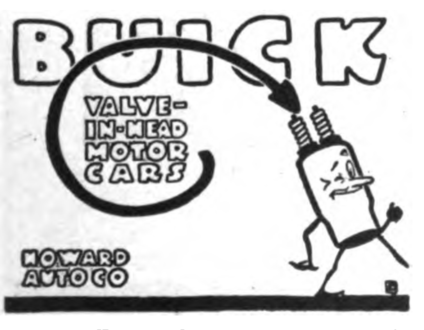
MANY of you are ex-service men—vitally interested in politics, politicians and public policy. The Veterans' Journal is an independent weekly news paper—we are not a part of nor do we represent any political faction or veterans' organization. We will at all times endeavor to discuss impartially all matters of public interest, especially to ex-service men and their friends along the entire Pacific Coast.

The subscription price, $2.00 per year, gives you fifty-two copies of the best Veterans' paper west of the Rockies (by veterans we mean those who fought in the late war, Spanish-American and Civil War).

Mail your $2.00 to-day—your paper will come to you promptly every week.

THE VETERANS JOURNAL
119 Henne Bldg.
122 W. 3rd St., Los Angeles, Calif.

AUTOMOBILES



1323 S. Flower St. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

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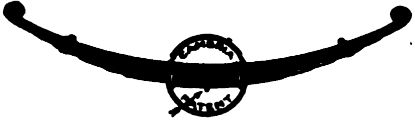
Cambria Spring Company
"Known the West Over"
CHROME VANADIUM AND CARBON
Steel Springs



"CAMBRIA" Twin Bar, the Unbreakable, Rattle and Squeak Proof Bumper

Madison Oilkipps
High Grade Second Growth Hickory Wheels
Springs, Wheels and Bumpers Repaired.
Wrecking Jobs Our Specialty.
Tire Racks and Platforms Applied
Forgings Demountable Rims Applied

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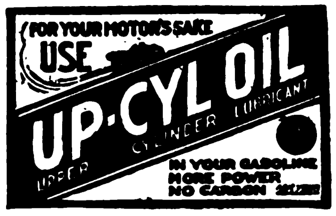
LUBRICATING OILS

See Signature of C. C. Bogardus on Can

At Your Dealer's At Your Dealer's



For lubricating all upper parts of a motor, such as the valves, guides, valve stems, seats, cages, upper cylinder walls, and the sealing of the combustiton chamber with a fine film of oil by vaporization.

WEST COAST SUPPLY CO.
900 S. Grand Ave. Los Angeles

H. L. Kraus has been appointed export manager of Milwaukee Motor Products, Inc., Milwaukee, Wis., manufacturing timers. Offices have been opened at 130 West 42nd St., N. Y. City.

PISTON RINGS

THE RING THAT CURES oil burning motors after others have failed is the genuine and original Oil Kontrol piston ring made by Sunset Mfg Co., L. A. Look for the name, beware of imitations. Jobbers and Distributors write for territory

SUNSET MFG CO., 1328 E. 6th St., Los Angeles, Calif.

White Heads New Company.

Charles M. White, Jr., for more than three years sales manager of Firestone Steel Products Co., has resigned to head a new organization that will bear his name—White & Co., Inc., with offices in Akron, O.; established by a group of men who are known in the automotive and rubber trade, and to handle several lines which it will merchandise through both channels.

* * *

Marvin Getting Rid of the Flu.

J. L. Marvin, assistant general manager of the National Automobile Chamber of Commerce, is spending some time at Hot Springs, Va., recuperating from influenza.

* * *

To Make Liberty Plugs.

Liberty Spark Plugs Corp. has purchased the assets of Federal Corp., Westfield, Mass., also the patent rights and trademark, to manufacture and sell Liberty spark plugs.

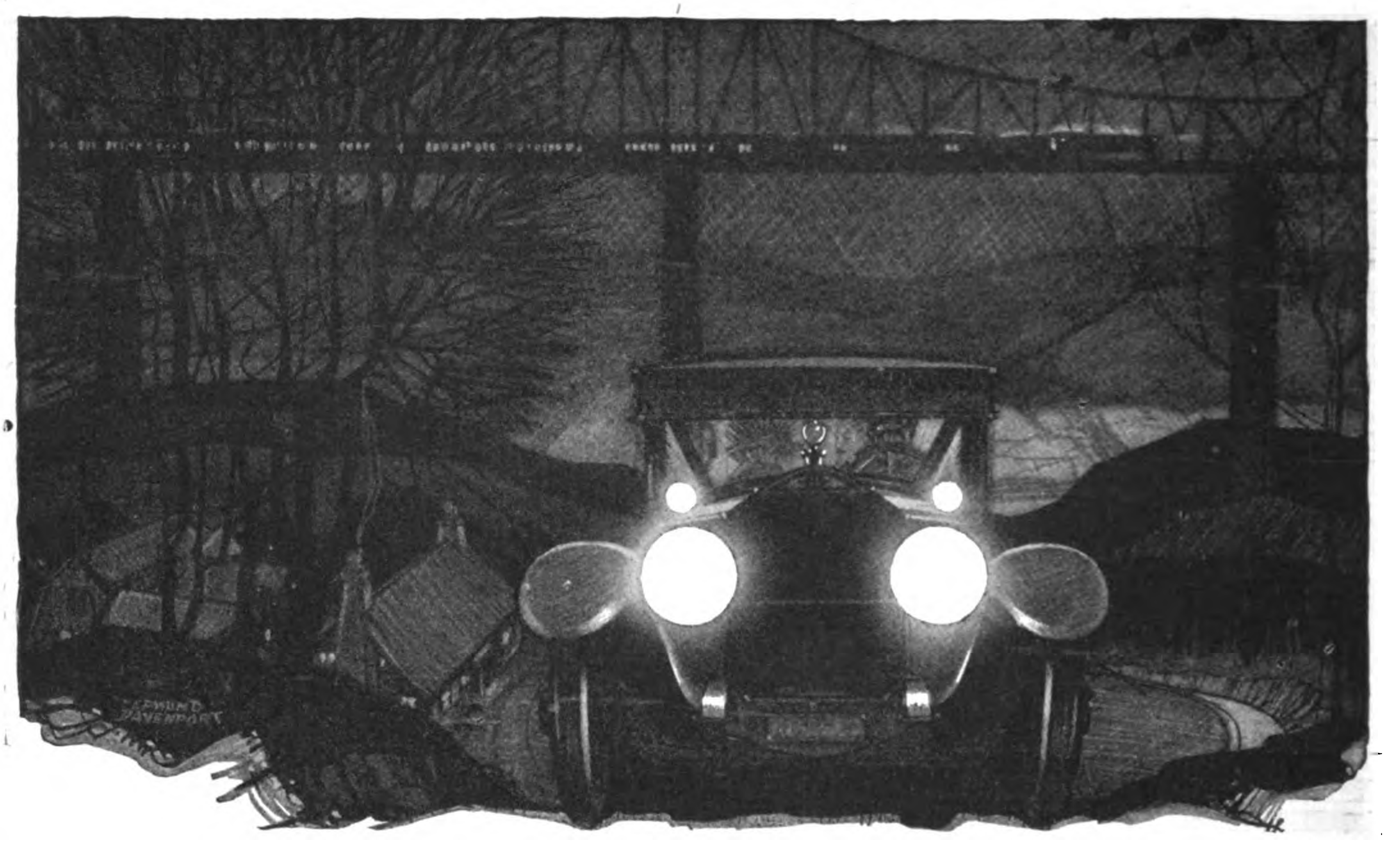
* * *

Core Joins Reynolds Spring Co.

Guy C. Core, former sales manager of the Jackson Motor Shaft Co., Jackson, Mich., has joined the Reynolds Spring company, of Jackson, as assistant sales manager.

* * *

Alvan Macauley, president of Packard, announces that MacManus, Inc., has been appointed advertising counsel.



THE man who *buys* a Westinghouse Battery gives himself the assurance that his battery is equal to emergency as well as ordinary demands.

The man who *sells* Westinghouse Batteries gives himself the assurance that his business is one of permanence and steady growth.

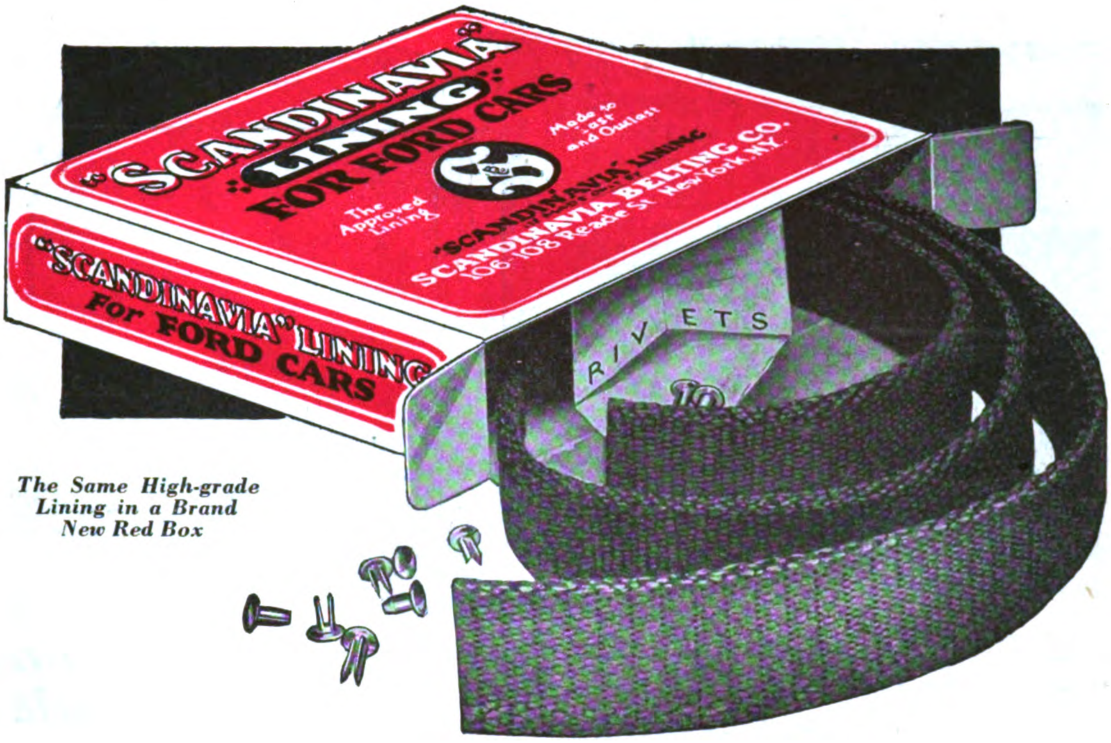
The Westinghouse policy is to build a battery that in every way will uphold the fame of the great organization which has sponsored the air brake, automatic railway signals and other world-noted achievements in mechanical science; to build it "oversize"; to price it reasonably; and to guarantee it not only in minimum months of service, but in terms of absolute satisfaction to the user. Good battery service station operators are invited to write for the whole Westinghouse story.

WESTINGHOUSE UNION BATTERY COMPANY
SWISSVALE, PA.

WESTINGHOUSE
RADIO
BATTERIES
"A" and "B" carry the Westinghouse assurance of quality, too.

One quality battery—the best Westinghouse can build; and a guarantee new in features and unequaled in liberality.

WESTINGHOUSE
BATTERIES


"SCANDINAVIA"
"LINING"
FOR FORD CARS
The Approved Lining
Made to Last and Outlast
"SCANDINAVIA" LINING
SCANDINAVIA BELTING CO.
106-108 Reade St. New York, N.Y.
"SCANDINAVIA" LINING
For FORD CARS
RIVETS
10

The Same High-grade Lining in a Brand New Red Box

Scandinavia Brake Lining is Made Especially for Ford Cars

SCANDINAVIA has become the accepted lining for FORDS, because it has proven itself to be a lining that will deliver 100% service during a long life of hard usage.

Woven from selected, long staple Southern cotton on looms especially designed for FORD brake and transmission lining. SCANDINAVIA weighs 25 to 35 per cent more than other linings—which means *more yarn, more body* and *more actual value.* Especially impregnated, processed and hardened (to resist heat, oil and grit and yet remain sufficiently pliable) to prevent chattering or glazing.

SCANDINAVIA is put up in convenient boxes with the necessary solid brass rivets for fastening to the bands. Cut into three equal-length pieces for Low and High Speed, Reverse and Brake Bands.

Write for Our New Folder "How to Change Ford Brake and Transmission Linings." We Have an Attractive Proposition for Jobbers and Dealers.

SCANDINAVIA BELTING CO.
106-108 Reade St., New York, N. Y.

BRANCHES:

Atlanta	**Boston**	**Chicago**	**Cleveland**
Easton, Pa.	**Los Angeles**	**Pittsburgh**	**Portland, Ore.**

R.C. WILCOX
AUTO REPAIRING
DOWMETAL
OWOSSO
POPULATION
12.575

$251.50 Profit in 5 Days -and in a town of- 12,575 Population!

Selling and Installing Dowmetal Pistons

No matter how dull business may be in garage or accessory lines there's always a way to make money on special equipment that makes a motor-car run better.

Bob Wilcox has proved that in the snug little town of Owosso, Michigan.

$251.50 in 5 days selling and installing DOWMETAL Pistons is not bad business in dull times. If a fellow can do that in a small city repair garage what can the big repair-service organizations do in big towns in engine overhauling seasons?

Fix this name in your mind. It is *not* aluminum but a new metal that our chemists have separated from a mineral brine. It is the lightest of all commercial metals.

DOWMETAL

These are the features that Wilcox talks—

—Sturdy construction with lightest weight.
—Annoying, destructive vibration conquered.
—More power and more speed for any car and every properly fitted set will prove the point.
—More pull in mud—more power on hills—with any car.
—Quicker getaway—instant acceleration—wider driving range in either old or new cars.
—Speed to win the national races—smoothness to suit the most fastidious lady-driver of a Ford Sedan.

Overhauling season is on. Put new life in the old cars—ask for details of this lightest-weight, non-scoring, long-wearing Piston metal. Wilcox has sold and installed more than 100 sets recently.

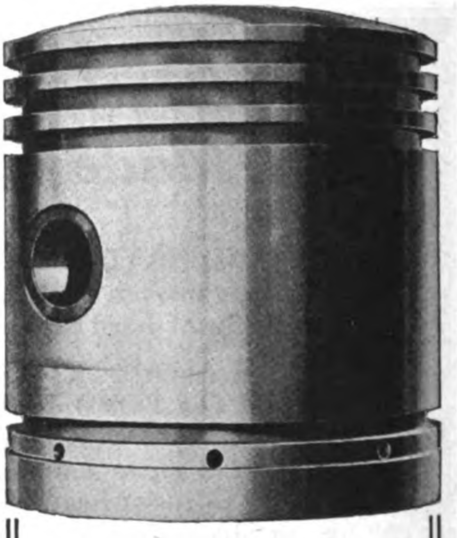
MOTOR SPECIALTY COMPANY
1212 South Figueroa Street
Los Angeles, California

THE ALTA COMPANY
417 Market Street
San Francisco, California

ROLLIN VAN AMBURGH
518 East Pike Street
Seattle, Washington

HARRY L. BRACKEN COMPANY
Salt Lake City, Utah

LAWRENCE MACHINE AND IRON WORKS
131 Third Avenue, West
Twin Falls, Idaho



Wilcox Has No Corner on Dowmetal Piston Profits

"I want you to know that we are very highly pleased with DOWMETAL Pistons. Every set we have sold has given perfect satisfaction, in fact our customers take the trouble to come back and show us how smoothly their motors run, and to tell us of the increased power, speed, and pick-up DOWMETAL Pistons has given them. Every DOWMETAL user in our territory is surprised at the gasoline and oil mileage obtained with these pistons. It is far superior to anything possible with any other equipment".

PERRAULT CO.
Cleveland, Ohio

"DOWMETAL is going over big with us. Every job is a wonder and not a dissatisfied customer."

STANLEY BROS
Hillsboro, Ohio

THE DOW CHEMICAL COMPANY TRADE DOW MARK *Midland Mich U.S.A.*

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Do You Want Pacific Coast Business?

IF You Want Jobbers

MOTOR WEST can put you in touch with Pacific Coast jobbers and manufacturers' representatives who have advised our Service Department that they are seeking territory on good automobile accessories, specialties and replacement parts.

IF You Want Territory

MOTOR WEST can put you in touch with manufacturers who are seeking Western representation on good automotive lines.

THIS SERVICE IS FREE

Write

SERVICE DEPARTMENT
Motor West Publishing Co.
Los Angeles, Calif.

AUBURN
Beauty-SIX

How much service per sale should a dealer give? Can you afford to "donate" your profit trying to keep a car sold? What do Auburn dealers mean when they say their profit is clean? Every live dealer is on his toes for information on this subject -- we'll answer with FACTS. It will pay you to write for this information.

AUBURN AUTOMOBILE COMPANY

Auburn, Indiana.

TRANSPORT TRUCKS

A Specialized Truck for Every Service

Transport's April Sales Smash Past Records

The total number of orders placed by Transport distributors for April delivery topped the record of any corresponding month of previous years in Transport history.

One thing this proves conclusively—that the new Transport line has won public approval in most pronounced fashion. In quality, in price, in all-around values represented it fully measures up to present-day requirements. That's why Transport distributors are today rolling up sales records unsurpassed even in the days of war-time prosperity. That's why Transport affords you such an exceptional opportunity to stimulate immediate sales and build solidly for the future.

What Transport now offers you is the result of intense preparation. Ability to forecast public demand, and to keep its organization intact and working to a definite end are responsible for Transport leadership.

Certainly a company that can advance so rapidly when business in general is at least twenty per cent below normal is a good organization to tie to. Ask for details.

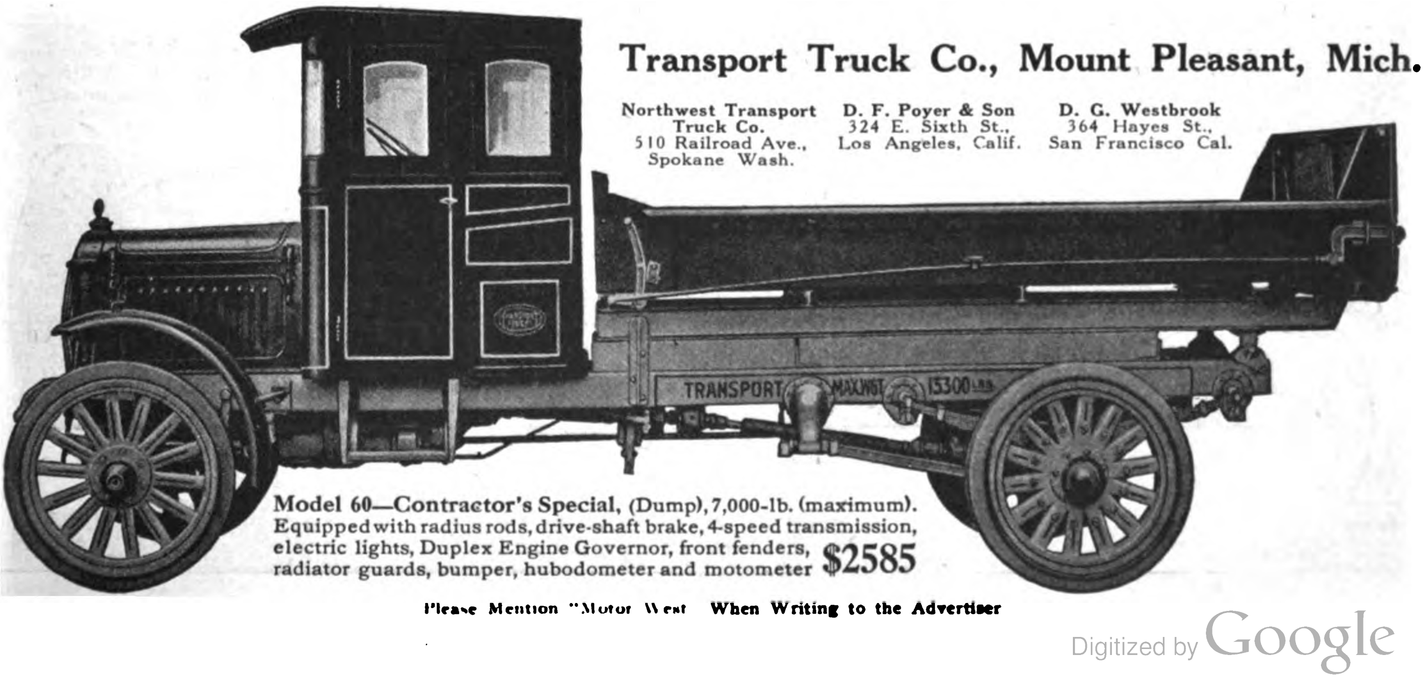
Model 15—2,000 Pounds Maximum
Rapid Transport, for light, fast delivery. Equipped with cord tires, electric lights and starter, seat, windshield, fenders and running boards, motometer, speedometer, extra rim, carrier and bumper - **$1295**

Model 25—3,000 Pounds Maximum
Complete with electric lights, front fenders, bumper, radiator guards, hubodometer and motometer - - - - - **$1495**

Model 35—4,000 Pounds Maximum
Equipped with radius rods, drive-shaft brake, four-speed transmission, electric lights, Duplex Engine Governor, front fenders, radiator guards, bumper, hubodometer and motometer - - - **$1885**

Model 55—6,000 Pounds Maximum
Same equipment as Model 35 - - - - - - - - **$2385**

Model 75—10,000 Pounds Maximum
Same equipment as Model 35 - - - - - - **$3485**



Transport Truck Co., Mount Pleasant, Mich.

Northwest Transport Truck Co.
510 Railroad Ave.,
Spokane Wash.

D. F. Poyer & Son
324 E. Sixth St.,
Los Angeles, Calif.

D. G. Westbrook
364 Hayes St.,
San Francisco Cal.

Model 60—Contractor's Special, (Dump), 7,000-lb. (maximum). Equipped with radius rods, drive-shaft brake, 4-speed transmission, electric lights, Duplex Engine Governor, front fenders, radiator guards, bumper, hubodometer and motometer **$2585**

five wheels, triple spoke, detachable at hub

WIRE WHEELS

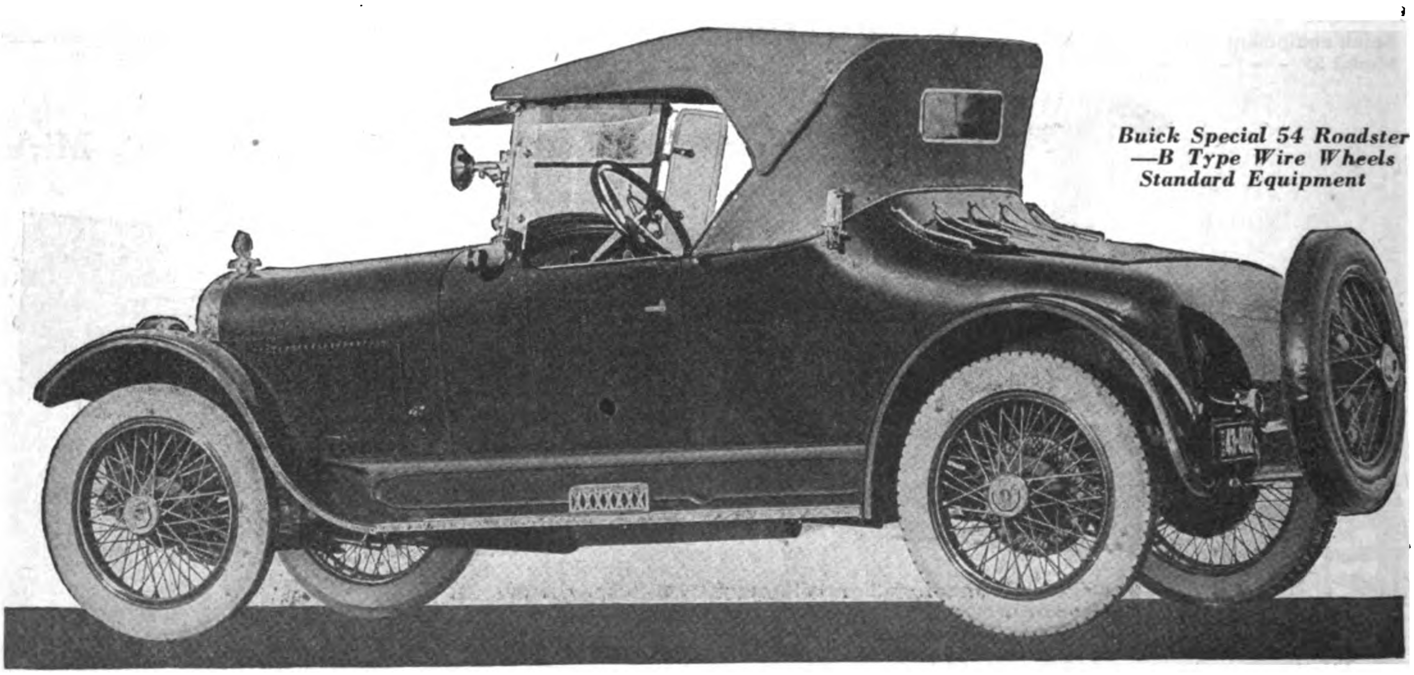
BY selecting WIRE WHEELS for this superb model—the Buick Special 54 Roadster—the designers assured:

Attractive appearance. Easy riding qualities. Quick tire change convenience.

Greater strength and additional safety, due to the TRIPLE spoke construction.

WIRE WHEEL CORPORATION OF AMERICA
(Successor to Houk Manufacturing Co.)
1700 Elmwood Avenue Buffalo, N. Y.

Direct Factory Branches, Distributors and Service Stations in all principal cities.



Buick Special 54 Roadster —B Type Wire Wheels Standard Equipment

A New Deal *for* Dealers

The New Oakland Six was designed and built to be the best light-weight six. The many new, exclusive features, never before used in building a car of this price, thoroughly prove its superiority.

Oakland's selling agreement also contains many new features of particular interest to a dealer seeking a real permanent connection.

Then too the future of Oakland holds a promise not excelled by any company.

Write or wire us for details. Your territory may be open.

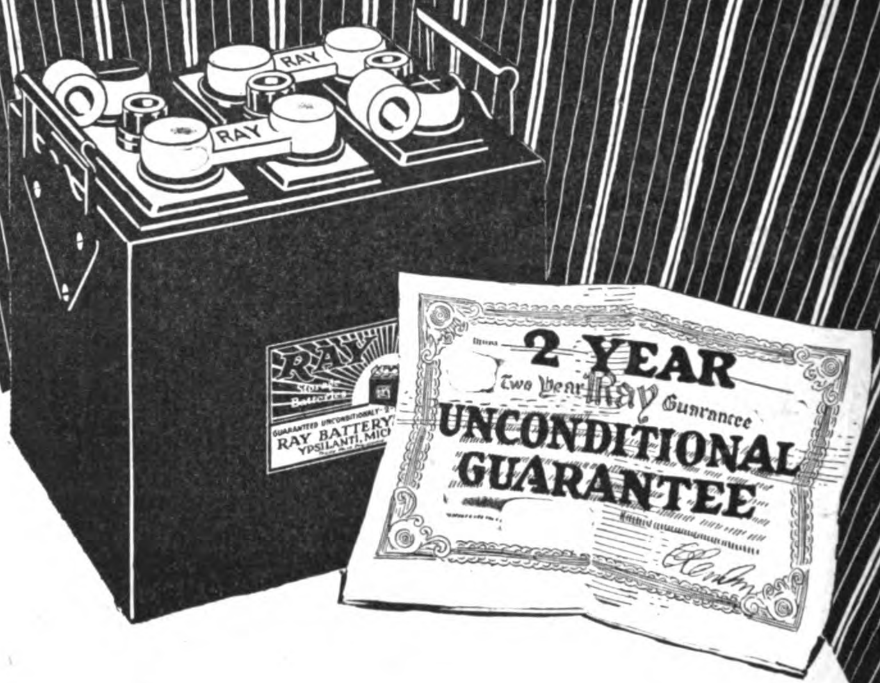
OAKLAND MOTOR CAR COMPANY
Division of General Motors Corporation
PONTIAC, MICHIGAN

THE NEW OAKLANDS

Five Passenger Touring Car
Two Passenger Roadster
Four Passenger Sport Car
Four Passenger Coupe
Five Passenger Sedan
Complete Chassis Only

The New

Oakland Six


RAY
RAY
RAY Storage Batteries
GUARANTEED UNCONDITIONALLY
RAY BATTERY
YPSILANTI, MICH
2 YEAR
Two Year Ray Guarantee
UNCONDITIONAL
GUARANTEE

The Only Battery

that is guaranteed Unconditionally for 2 years from date of purchase.

When you sell a ***Ray*** Battery you sell uninterrupted service—starting, lights and ignition—for 2 years at the price of one battery.

Two thousand dealers are selling ***Ray*** Batteries. Every dealer claims that ***Ray*** sales mean the best profits. You get all the profit, there is no lost time making compulsory inspections or arguing with users to charge against your earnings.

Ray dealers are selected carefully—if your territory is still open you may become a ***Ray*** dealer.

Write for dealer information and full details of the wonderful ***Ray*** Battery and the 2 year Unconditional Guarantee.

Ray Battery Company
43 North Huron St.
Ypsilanti, Michigan

RAY

"The sturdiest and fastest Stock Car I have ever driven to date"

Howdy Wilcox

Howard S. Wilcox, world's speed king and winner of the Indianapolis Motor Speedway 500-mile international classic.

On Thursday, March 9, 1922, I drove a strictly stock Haynes 75 Speedster over the Indianapolis Motor Speedway course, at Indianapolis, Indiana, for a distance of TWENTY-FIVE (25) MILES. *I attained speeds ranging from seventy-four (74) to eighty (80) miles an hour. The speeds were clocked officially by an electric timing apparatus. . . . . At topmost speed it showed a decided lack of motor vibration. It is the sturdiest and fastest stock sport car I have ever driven to date.*

(Signed) "HOWDY" WILCOX

75 *miles an hour if you want it with your* HAYNES 75 SPEEDSTER

At its topmost speed of more than eighty miles an hour, the strictly stock Haynes 75 Speedster demonstrated its lack of motor vibration. Photograph shows "Howdy" Wilcox making a sharp curve on the Indianapolis Motor Speedway.

This test proved not only the stamina of the powerful new Haynes-built 75 motor, but the unsurpassed value of Haynes engineering and construction principles. It showed beyond a doubt the worth of the twenty-eight years' automobile-building experience of the Haynes organization. It is convincing proof to every present and future owner of a new, improved Haynes 75 Speedster that he has a car which possesses all the reserve power, strength and dependability he can ask. It shows to the prospective customer for any model of Haynes car the underlying principles of its construction, for all Haynes cars are designed and built by the same men in the same big Haynes plant at Kokomo. As a member of the 1922 group of Haynes cars, it is typical of the values which Haynes dealers are offering. Good territories are open. Write, wire or telephone for confidential appointment.

In writing or wiring, address department 649

$2395

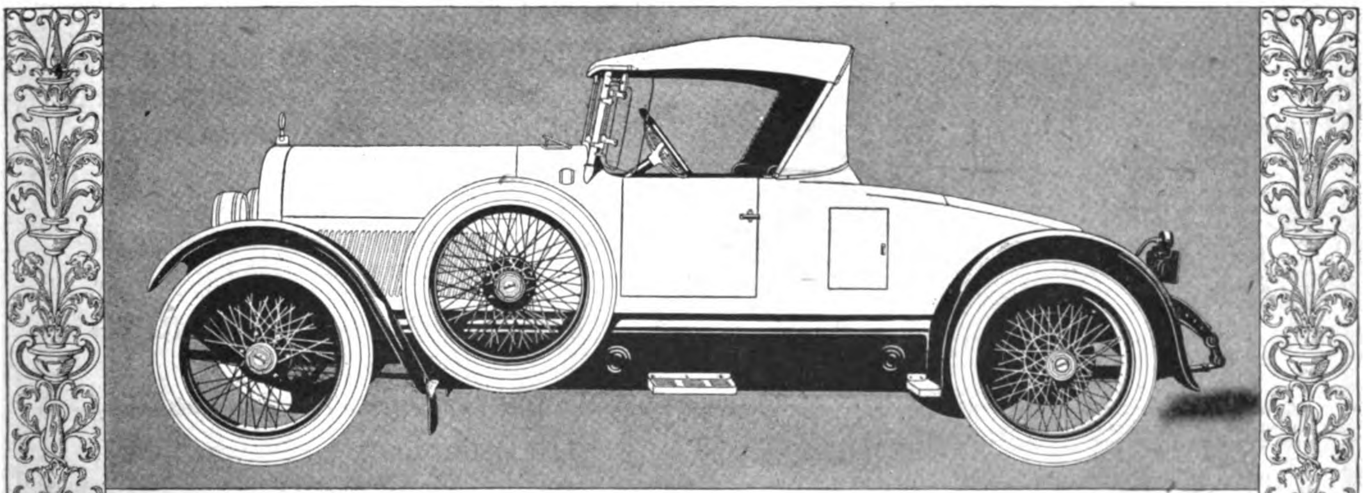
F. O. B. FACTORY

formerly $2595

THE HAYNES AUTOMOBILE COMPANY, *Kokomo, Indiana*

EXPORT OFFICE: 1715 Broadway, New York City, U. S. A.

© 1922, by T. H. A. Co.

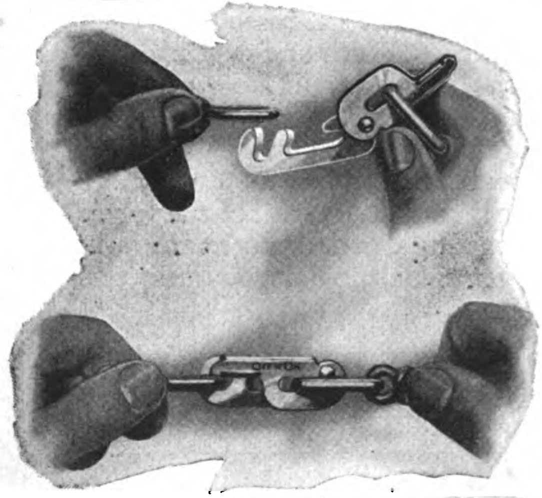


The new, improved Haynes 75 two-passenger Speedster is equipped with the Haynes-built six cylinder 75 motor, the same as that used by Howard Wilcox during the official test at the Indianapolis Motor Speedway. Individual steps and individual fenders, and the two extra wire wheels are standard equipment. Wind deflectors, rear vision mirrors, windshield cleaners, exterior side cowl lights, and searchlight type head lamps are also furnished at no additional cost.

A New Tire Chain that Upsets a Tradition

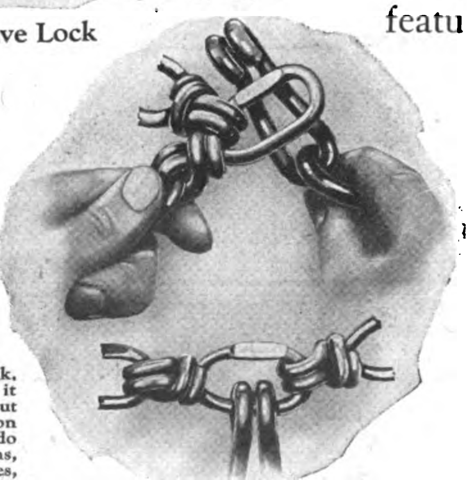
It is called

OFF'N'ON



The Positive Lock

The patented lever lock, illustrated above, makes it easy to put them on and to take them off. It takes up slack, thus saves wear on tires and chains alike. No lost chains—no loose chains. OFF'N'ON has a positive locking device.



The patented slip-on link, shown at right, makes it easy to take off worn-out cross chains and put on new ones. A child can do it. OFF'N'ON Chains, with these special devices, cost no more.

The Slip-on Link

It can be put on and taken off in a hurry. It has removable cross chains that can be replaced anywhere, anytime by anyone, without pliers or other devices—and in an instant.

It has a positive locking device that takes up the slack in the side chain, thus saving wear on both tire and chain.

Because of these unusual and modern features the OFF'N'ON Chain is a big profit-maker for jobbers and dealers. *And it costs no more than others.*

Write us for further particulars giving the name of your jobber

PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers

520 Belmont Ave., Newark, N. J.

Branches:

CHICAGO—17 So. Jefferson St.
KANSAS CITY—1712 Grand Ave.
ATLANTA—24 Nassau St.
SAN FRANCISCO—977 Mission St.

REO

We're Off—Now Watch Reo

If you have envied the Reo distributor his advantage in having not only a name and a reputation, to conjure with, but a complete line, you will envy him still more from now on.

Reo came thru the recent "slump" with flying colors—as was to be expected.

A sound, conservative policy, and a sterling product, backed by plenty of cash—that spelled safety at all times. And now the Reo line has a still greater range.

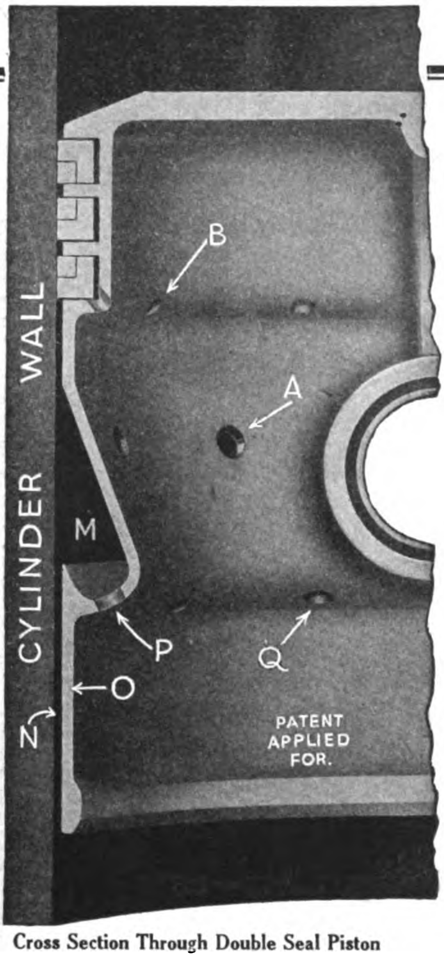
In addition to the four standard types of passenger cars, that Mighty Speed Wagon, and the Business Coupe, we have added a Taxicab—designed and built expressly for that severe service.

Surely the Reo dealer is "sitting on top of the world" these days.

Changes occur occasionally—your application on file might secure the coveted prize for you—a Reo Franchise.

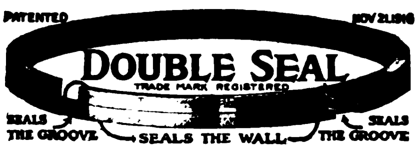
Reo Motor Car Company, Lansing, Michigan

Los Angeles Branch: Corner Twelfth and Hope Streets
San Francisco Branch: 1720 Van Ness Avenue



Cross Section Through Double Seal Piston

The hook-shaped Oil Control Groove (M) acts as a catch basin into which oil is forced from the conduit (N) by atmospheric pressure in the crankcase. This oil is drained through holes (P & Q). Vent holes (A) allow atmospheric pressure to enter Oil Control Groove over oil and equalizes the pressure in the groove with that of the crankcase. Holes (B) allow atmospheric pressure to get behind the oil ring which adds pressure against the cylinder during the suction stroke.



Piston Rings

Perform the two functions that a good ring must perform—they seal not only the cylinder wall, but also the piston groove. Write for complete information.

SEALS THE WALL OF THE CYLINDER

SEALS THE GROOVE OF THE PISTON

DOUBLE-SEAL

Oil-Control-Piston

Many of America's best known manufacturers of cars have adopted this piston as standard factory equipment because it absolutely solves the oil problem. In every test that could be made to determine the efficiency of a piston the Double Seal Piston has shown results that are nothing short of remarkable.

This piston is cast from gray iron, the most satisfactory material yet developed for the purpose, and is of extremely light weight. It is not a "freak" piston in any way. It is scientifically designed for a special purpose and is endorsed by many leading automotive engineers.

Each Piston Individually Boxed

The label on each box gives the stock number, size, number of grooves, etc. No chance for mistakes. This convenience for the jobber and dealer is a feature that has been found valuable.

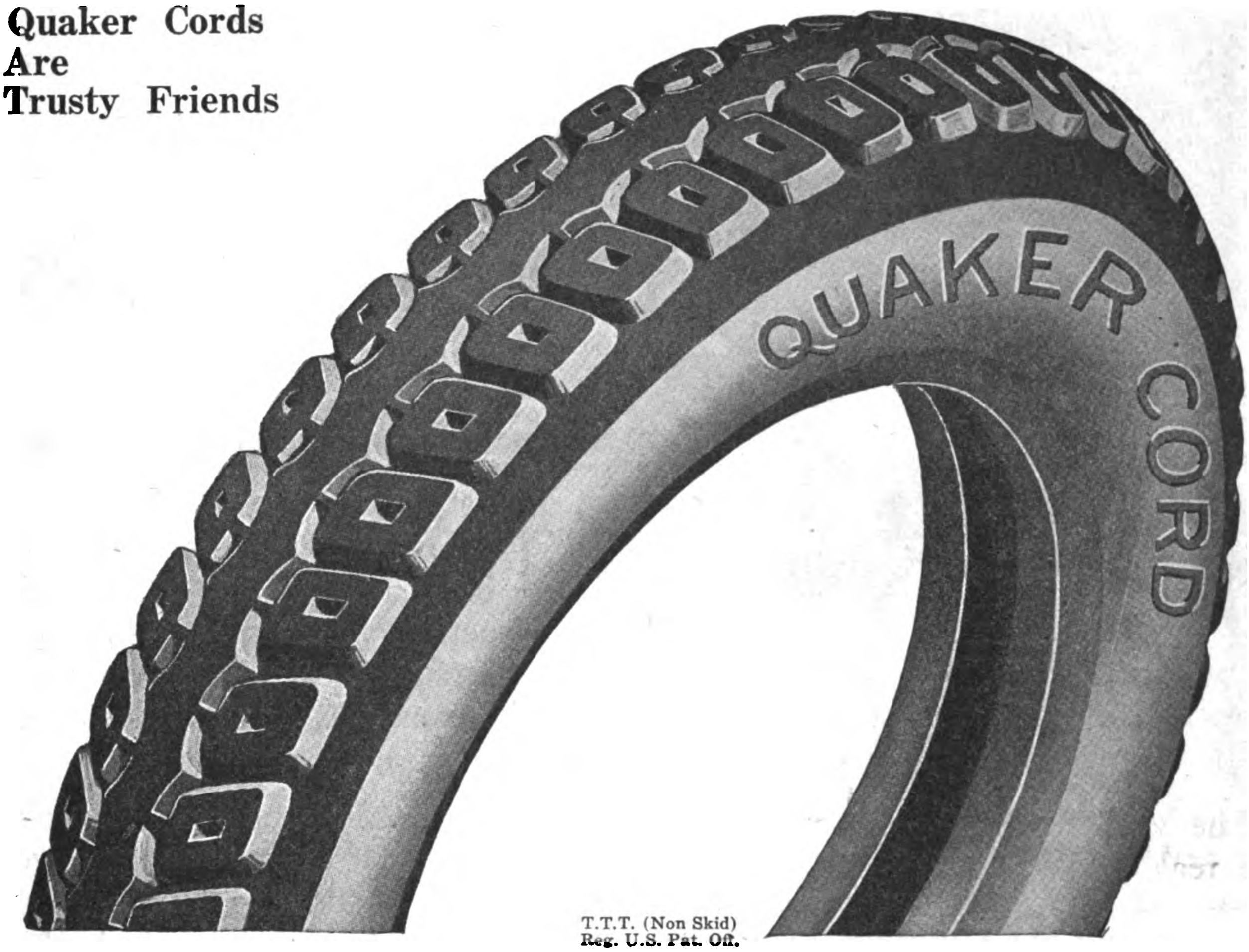
Our dealer proposition and discounts are liberal. Write for descriptive literature, list of cars for which Double Seal Pistons are made and complete information.

DOUBLE SEAL RING COMPANY

General Sales Office **2335 S. Michigan Ave., Chicago, Ill.**

SALES BRANCHES—DOUBLE SEAL RING CO.

ATLANTA, GA., 31 E. North Ave.
BALTIMORE, MD., 1023 Cathedral St.
BOSTON, MASS., 107 Massachusetts Ave.
BUFFALO, N. Y., 1377 Main St.
CHICAGO, ILL., 2335 Michigan Ave.
CLEVELAND, O., 1841 Euclid Ave.
DETROIT, MICH., 4602 Grand River Ave.
EL PASO, TEXAS, 412 Myrtle Ave.
FRESNO, CAL., 1360 Broadway.
FORT WORTH, TEXAS, 316-328 Lake St.
KANSAS CITY, MO., 214 E. 17th St.
LITTLE ROCK, ARK., 324 W. 7th St.
LOS ANGELES, CAL., 603 W. Pico St.
MILWAUKEE, WIS., 100 Mason St.
MINNEAPOLIS, MINN., 825 Hennepin Ave.
NEW YORK, N. Y., 1834 Broadway.
OKLAHOMA CITY, OKLA., 416 N. Robinson St.
OMAHA, NEB., 415 S. 24th St.
PHILADELPHIA, PA., 1327 N. Broad St.
PITTSBURGH, PA., Hiland and Baur, 206 Werner Bldg.
PORTLAND, ORE., 90 N. Broadway.
SACRAMENTO, CAL., 1008 J St.
SALT LAKE CITY, UTAH, 50 E. 4th South St.
SAN FRANCISCO, CAL., 1124 Polk St.
SEATTLE, WASH., 1213 Pine St.
WINDSOR, ONT., 19 E. Sandwich St.



Quaker Cords
Are
Trusty Friends

T.T.T. (Non Skid)
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Dividend Payers

QUAKER CORDS are more economical because they are "Miles Cheaper."

The car owner's speedometer proves this every time.

No wonder new dealers in all parts of the country are eager to represent us. They know how the Quaker Cord stand up.

If there is no Quaker dealer in your immediate locality, write for our selling proposition at once.

QUAKER CITY RUBBER COMPANY

Established 1885 **Factories—Philadelphia**

Philadelphia	Chicago	Pittsburgh	New York
624-26-28 Market St.	217-221 W. Huron St.	211 Wood St.	53 Murray St.

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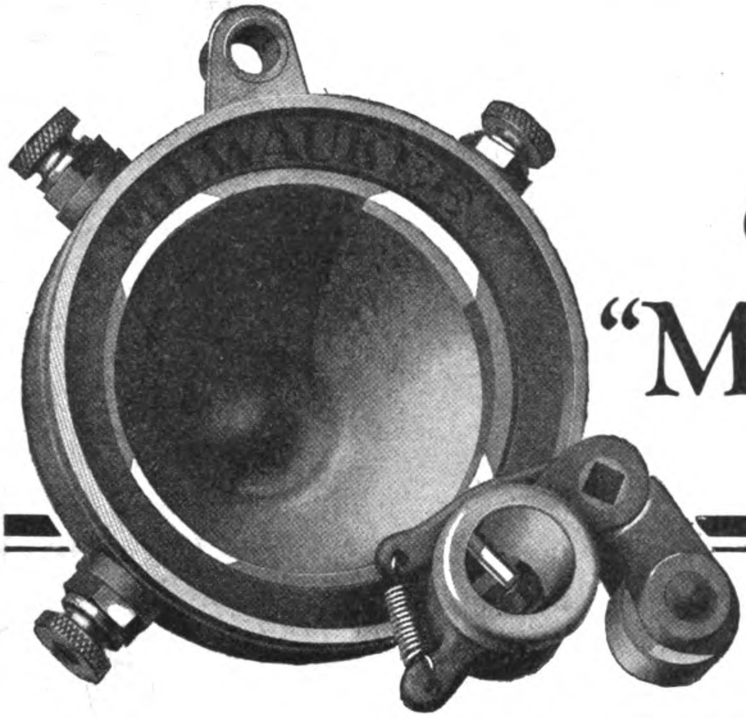


One of Your "Meal-tickets"

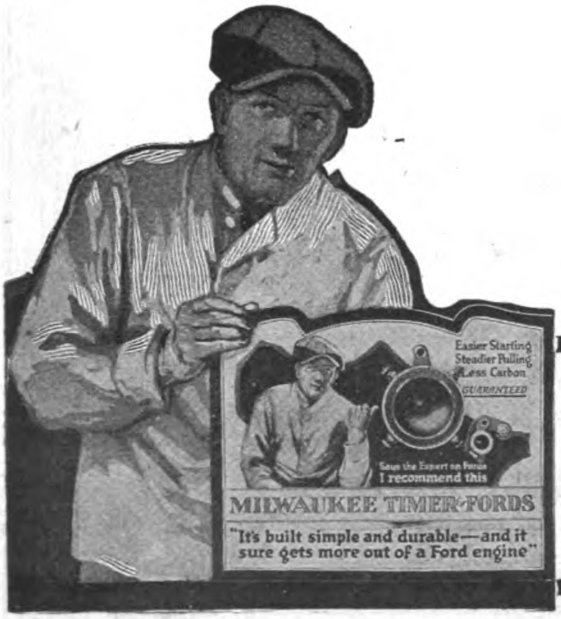
THERE'S real money in handling goods like the Milwaukee Timer. Fast turnover—no big investment required—steady demand—liberal profit on every sale—no dead stock. No wonder most progressive dealers are *concentrating* on the Milwaukee—featuring and displaying it to the limit.

The Milwaukee should be one of the biggest little items in your store. There's a real, man-size advertising campaign behind **it—by far the most aggressive** backing ever given any timer. In fact, consistent advertising to the Ford owner, and the Milwaukee Timer's proved dependability, have made it the fastest selling timer the trade has ever known.

Make *your* share of Milwaukee Timer profits. If your timer stock is low, re-order now from your jobber. Feature the Milwaukee—you'll find it pays!

The Milwaukee Retails at $2.00

Milwaukee Motor Products, Inc.
MILWAUKEE WISCONSIN


Easier Starting
Steadier Pulling
Less Carbon
GUARANTEED
Says the Expert on Fords
I recommend this
MILWAUKEE TIMER-FORDS
"It's built simple and durable—and it sure gets more out of a Ford engine"

"Let Me Send You One of These Free Display Stands"

"I want every one of my dealer friends to have one of these steel Display Stand merchandisers. It holds a complete timer and catches the eye of every customer. It will help you sell many timers. Lithographed in five attractive colors. Sent FREE, POSTPAID, on request. Write for yours."

The Expert on Fords.

MILWAUKEE TIMER *for* FORDS

"Ford Faithful" Oiling System

Selling Fast—Fully Patented

New Life for Fords!

When a Ford is not giving its fullest power, the chances are 3 to 1 it needs the Ford Faithful Oiling System. Last year proved that Ford Faithful is a best seller with Coast dealers, largely on the strength of one Ford owner recommending it to another!

50% Increase In Motor Efficiency

National advertising is now creating national demand. Dealers are enthusiastic. For $5.75 they can give the Ford Owner an oiling system, quickly installed, that prevents burnt-out bearings, scored cylinders, chattering and grabbing, and assures more power under all conditions, with a saving in gas and oil. Sells on a 10 days' free trial plan.

WRITE TODAY!

If your jobber cannot supply you—(ask him first)—write to us direct. You will make more friends with the Ford Faithful than any other device you sell. This is experience—not theory! One sale brings a dozen more! Write today for prices, etc., to

Infringements Prosecuted

Following the decision in the U. S. District Court, favorable to us, we are prosecuting infringements of our patent rights. Keep clear of imitations.

$5.75

FORD OWNERS

See your dealer today about the "Ford Faithful" Oiling System at $5.75.

He has it or can get it for you. If not, send money direct to us. Ten days' trial, with your money back if not satisfied!

W. O. THOMPSON
MANUFACTURING CO.
PASADENA CALIFORNIA

50% More Motor Efficiency!

Like a Flash

—the "D-H" motored Stutz sprang into the limelight, in the field of fine cars.

Like a flash the motoring public recognized in it the realization of ideals for which automobile owners had been hoping and engineers had been striving for many years.

Like a flash Stutz dealers noted an improvement in business—a tangible increase in sales—that has been growing day by day.

Just as no American-made car matches the "D-H" motored Stutz in the individuality of its mechanism and the soundness of its engineering principles, so, too, no other dealer franchise closely approaches the Stutz contract for liberality of terms, fairness to dealers, and opportunity for profit.

Just as the "D-H" motored Stutz simplifies the problems of selling a high-grade car without unwarranted responsibilities and expense, so does the Stutz franchise enable dealers in small as well as large communities to establish a factory connection that eliminates those elements which, in the past, have been a burden to the dealer.

If you have not investigated the Stutz proposition for your territory, you are overlooking a real opportunity. A letter or telegram will bring you complete information.

STUTZ
With the "D-H" Engine and Compensating Spring Suspension
STUTZ

A BIG STORY
in a little book

The Stutz—with the "D-H" Engine and Compensating Spring Suspension—is a real achievement. It is a matter of vital interest for everyone who sells or drives a motor car.

Here you have every advantage of multi-cylinder design without any of the usual complications—a car of the very widest performance possibilities without any of the intricate, hair-trigger adjustments, that is practically independent of service attention.

A simple, non-technical description of the "D-H" motored Stutz is now available. A copy is yours for the asking. Just send in your request. You will be under no obligation.

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

CLEVELAND SIX

There's No Guess About Its Future

THE end of this year will reveal certain strong manufacturers who will have earned an enviable position—a position of undisputed and permanent leadership in their individual fields.

But the dealer who waits until then will find that the opportunity of securing these lines has been grasped by foresighted business men who realized the importance of permanency.

That Cleveland Six will be in a position of permanent leadership is evidenced:

1. **By the spectacular success which it is making today.**
2. **By the strong financial position of its makers.**
3. **By the aggressive organization behind it.**
4. **By the unsurpassed manufacturing facilities.**
5. **And last but not least by a factory policy which insures satisfaction of owners and success for dealers.**

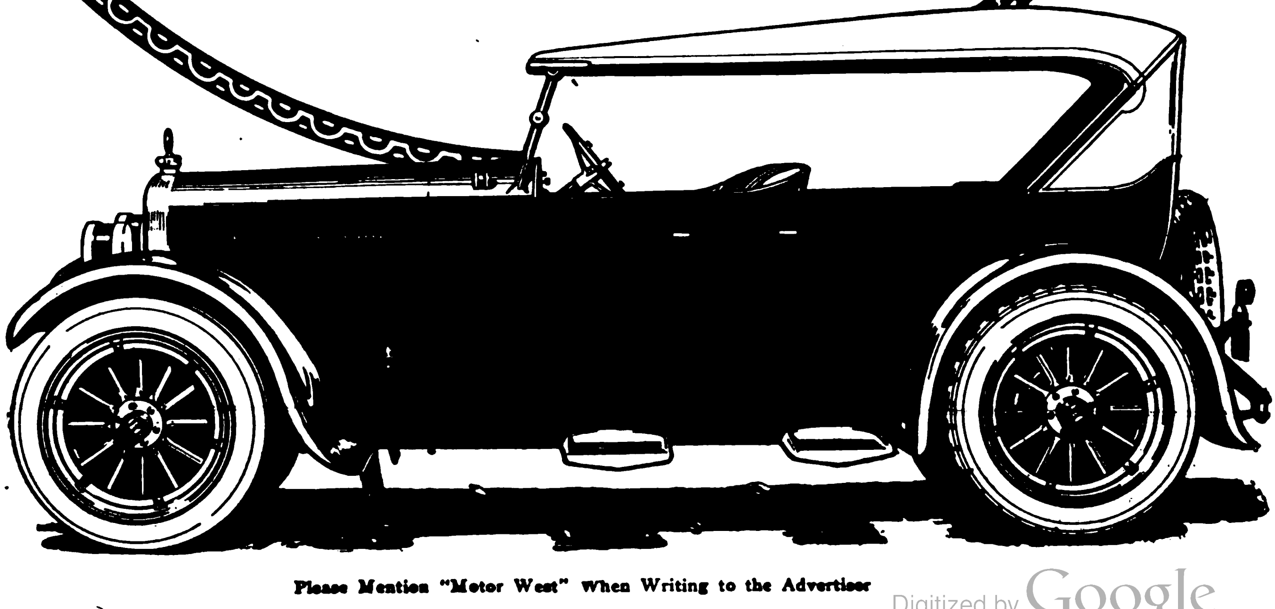
The great popularity of the new Cleveland Six at its extremely low price assures a profit from the start.

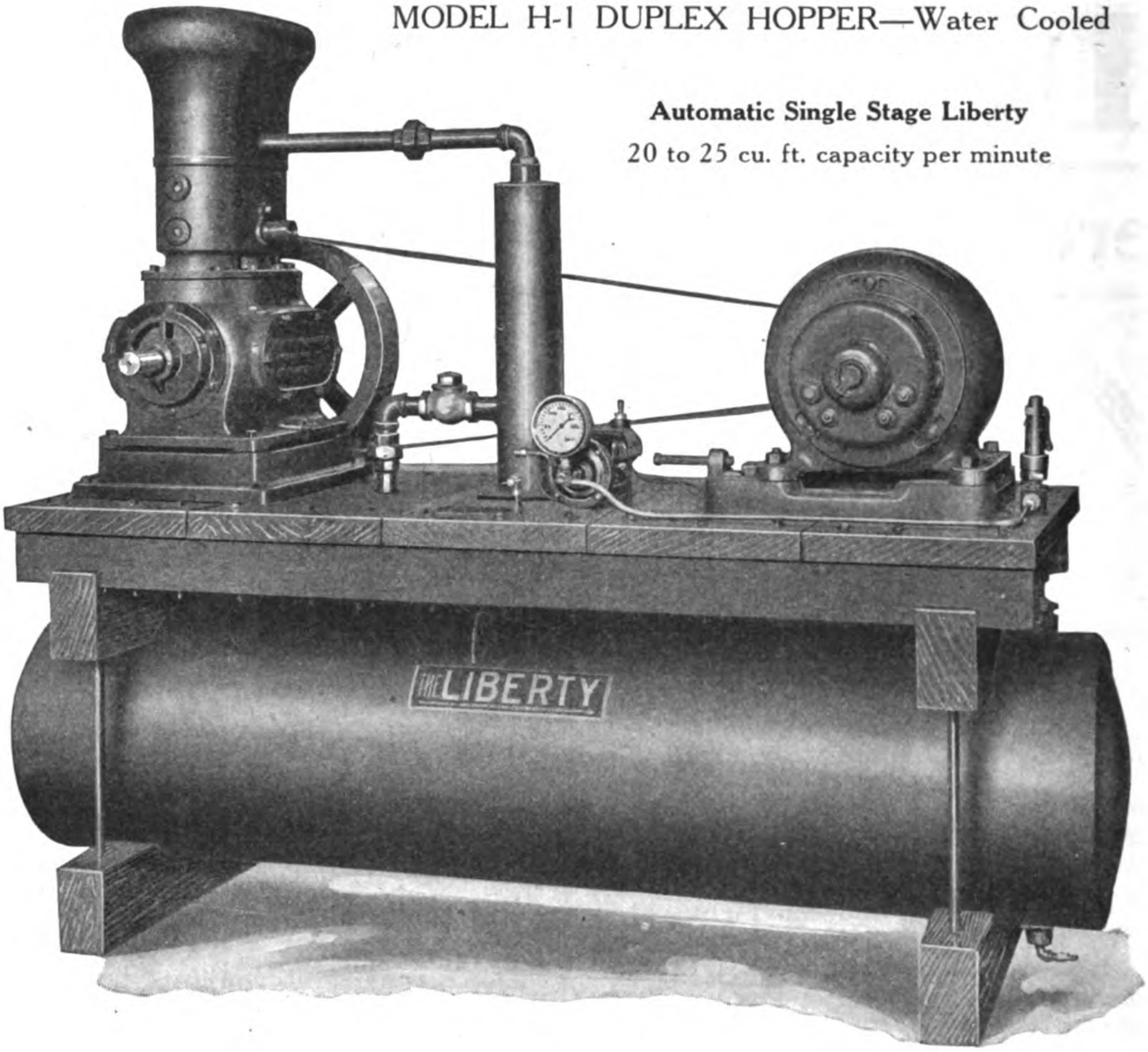
Don't assume your territory is closed. Find out.

Don't wait until your opportunity is gone.

Write for the complete Cleveland story today.

CLEVELAND AUTOMOBILE COMPANY, CLEVELAND
Export Dept., 1819 Broadway, New York City
Cable Address "CLEVEAUTO"





MODEL H-1 DUPLEX HOPPER—Water Cooled

Automatic Single Stage Liberty

20 to 25 cu. ft. capacity per minute

An Attainment In Mechanical Air Compression!

As high as 200 pounds pressure may be continuously maintained with the Liberty "H-1." It has two cylinders, each with 3½" bore and 4" stroke. Twenty to twenty-five cubic feet capacity per minute. Comes equipped with a standard 5 horsepower motor, any current, 18" x 72" receiving tank for 200 pounds pressure. Special filtering and unloading base. Write Us To-day for Price and Terms.

Here's a real, big, Air Compression giant! It's designed to meet All the requirements of the largest garages, service stations, factories, etc. Ideal for engine cleaning, car washing, paint spraying, sand blasting, mattress stuffing, hat finishing, and the thousand and one other uses for which compressed air is essential. Economical, powerful, quiet, of simple, understandable construction, parts interchangeable, the Liberty Air Compressor stands pre-eminent among Air Compressors of the bigger, better class. This Liberty is built for the big job man who needs a compressor that will fill the biggest compressed air needs. Ask for particulars regarding the Liberty H-1. Write Us Today!

AIR COMPRESSOR AND EQUIPMENT CO.

46-50 NATOMA STREET, SAN FRANCISCO, CALIF.
504 SO. SAN PEDRO STREET, LOS ANGELES, CALIF.
1413 CARROLL AVENUE, CHICAGO, ILL.

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 4 JUNE 1, 1922 $3.00 PER YEAR

BABSON GUESS ON COAST IS A "BULL"

Predicted Regional Suffering in This Year and Next, but Registrations in California Show He's Wrong.

That Babson, the little Massachusetts statistical wizard, has an organization for gathering and analyzing commercial data that is worthy of high praise, is admitted by many thousands of commercial men who use the Babson service; but Babson is not an infallible prophet, and he should watch his ps and qs in prognosticating about the Pacific Coast.

Perhaps even so thorough a man is not able to see clearly, this far. In his report of January 24 he said:

"1922 should average, for the entire country, no better than 1921. As the East was hardest hit and the Pacific Coast suffered least during the last two years, so during 1922 and 1923 the East will be recovering while the Pacific Coast, especially the southern portion, will more or less suffer."

Guess again, Mr. Babson! Why, sufferin' codfish! The Pacific Coast is recovering as rapidly as any reasonable optimist could ask. No part of it, large or small, has any cause to be envious of any field of similar area elsewhere.

As to California, please note that, whereas San Francisco's bank clearings decreased continuously during the depression, now that its time has come to suffer—according to Babson—its clearings are increasing.

Automotively, California is able to sit up and remark that for the first four months of this year it registered 13,063 more motor vehicles than it did in the same four months in 1921—a gain of 43 per cent!

Unquestionably reflecting general commercial improvement, motor truck demand again is approaching normal in California. In this year's first four months, 1063 more new trucks were registered than in the same period last year—a gain of 33.7 per cent!

Passenger car registrations, from January 1 to the end of April this year gained almost exactly 12,000 over the same period last year; and a remarkable fact—registration of the most used low priced car, the Ford, was in smaller proportion in April this year than a year ago. There were 808 fewer Ford registrations in April, 1922, than in April, 1921. Surely that does not mean that California is suffering. Rather, it means that more California people are able to buy higher priced cars now than last year, which was before the Babson-predicted period of suffering began.

Comparative registration figures on cars and trucks for the first four months of 1921 and 1922, in Northern and Southern California, follow:

	Nor. Cal.		Sou. Cal.	
	Cars	Trucks	Cars	Trucks
1921				
Jan.	1,593	199	2,003	213
Feb.	1,310	183	1,903	243
Mar.	5,525	720	5,729	747
Apr.	4,915	384	4,131	464
	13,343	1,486	13,766	1,667
Total first 4 mos. of 1921				30,262
1922				
Jan.	1,972	185	4,049	369
Feb.	3,719	481	4,895	604
Mar.	5,862	624	6,159	647
Apr.	5,903	629	6,550	677
	17,456	1,919	21,653	2,297
Total first 4 mos. of 1922				43,325

To Make Doble Steamer in L. A.

After making 30 cars, war halted progress of Doble Steam Motors Corp., San Francisco. Recently it took on new life, was incorporated in Delaware with $10,000,000 stock and, it is reported, expects to manufacture in Los Angeles. Next year's output, says the report, is to be 150 to 200 cars, with a 500 car schedule later hoped for. The lowest price is to be $8000, making to individual order. At first it is to be largely an assembling proposition. Later the car is to be made practically completely in the plant.

DEALERS PREFER THEIR OWN SHOW

Questionnaire Proves Majority Do Not Believe Coming General Exposition in Los Angeles Would Do.

Los Angeles' chamber of commerce hoped for automobile participation in the huge Pageant of Progress exposition to be held in Exposition Park next autumn. Of 58 replies to 60 questionnaires sent to members of Los Angeles Motor Car Dealers' Association by its secretary, Burt Roberts, 44 voted in favor of an independent show, that would not be "lost in the crowd." So there may be a Los Angeles dealers' show, even if in a tent, in October or November.

The same questionnaire showed little interest in the effort of G. P. Bullard, A. A. A. representative, to renew Los Angeles-Phoenix road race interest. Track racing and economy runs seem to be regarded by the dealers as more in accord with the times.

Automotive Chief to Tour Coast.

Gordon Lee, chief of the Department of Commerce automotive division, will leave Washington for a Pacific Coast tour in July. He will consult manufacturers, dealers and exporters, on foreign trade. His schedule is: San Diego, July 6; Los Angeles, July 7; San Francisco, July 12; Medford, July 14-16; Salem, July 17; Portland, July 18-19; Olympia, July 21-23; Seattle, July 24 and 26-28; Tacoma, July 25; Spokane, July 29.

Important Anti-Warren Decision.

May 29, in Los Angeles, U. S. District Judge Bledsoe decided Thompson Brothers, Fresno contractors, did not blend road materials so as to infringe Warren Brothers' patent rights. Appeal is expected.

Requests for information indicate a huge Coast tourist crop this year.

6th Annual Economy Run Los Angeles to Camp Curry Yosemite May 20th-21st 1922

WHEN THE NOTABLE ECONOMY RUN OF MAY 19-20, FROM LOS ANGELES TO YOSEMITE VALLEY, WAS FINISHED.

ALL 16 STARTERS FINISH LONG RUN

Chevrolet, Earl, Templar, Oakland and Dorris Win in Five Classes in Los Angeles-Yosemite Economy.

Clambering upward through hard-won miles of liquid High Sierra mud, beneath skies that threatened more moisture, sixteen cars, representing the entire field of starters, reached Camp Curry, in Yosemite Valley, in the sixth annual Los Angeles-to-Camp Curry economy run, May 19-20.

There were five classes, based upon the number of cylinders and the factory price of each car. The respective winners in these classes were the Chevrolet, the Earl, the Templar, the Oakland, and the Dorris. The Oakland also received the sweepstakes cup.

In Class 1-E the Chevrolet had no competition. It was the only car represented in its price class. It covered the 364 mile route on 12 gallons of gasoline, 1 pint of oil, 12 pints of water, finishing with a ton mileage of 41.85. It was entered by the Chevrolet Dealers' Association of Los Angeles, and was driven by Dominic Basso, who put the car through a remarkably economical performance without the stimulus—often a tremendous advantage in fact—of close competition in his own class.

The Class 2-E cup was won by the Earl, appearing in its first economy run. It made the second highest ton mileage among the 16 contenders, and was equaled only by the Chevrolet in gasoline mileage, both cars making 30 miles to the gallon. Driven by Harry K. Tarkington, it averaged a ton mileage of 51.3 by consuming 12 gallons of gasoline, 1 pint of oil, 7 pints of water, and also gave the Oakland a very tense race for sweepstakes honors, losing to the 6 cylinder car by .15 of a point.

In Class 3-E the Templar was winner, with a ton mileage of 46.28, and a consumption of 14 gallons of gasoline, no additional oil, 2 pints of water. Its driver, Leland S. Foulke, figured as the only winning pilot in three consecutive economy runs, but a leak in the gasoline tank, discovered only after passing Miami Lodge, prevented him from equaling his excellent figures of last year.

The Class 4-E and sweepstakes winner, the Oakland, driven by Harry Nevinne, won against severe competition both inside and outside of its class, Its ton mileage was 49.20, and compared with 49.02 for the Stephens. The winner used 12¼ gallons of gasoline, no additional oil, 2 pints of water.

The Class 5-E victory went to the Dorris, another three-time repeater. It was driven by K. C. Purdy. This car was more than 500 pounds heavier than any other car in the run. Its ton mileage was 48.4, and it used 20⅜ gallons of gasoline, no additional oil, 2 pints of water.

The original schedule called for the run being staged May 12-13, but heavy rains, and slow melting snow beyond Wawona, caused postponement of one week. Friday night, May 19, however, with the run practically half finished, moisture again fell in the Sierras, in time to make all cars show endurance as well as economy.

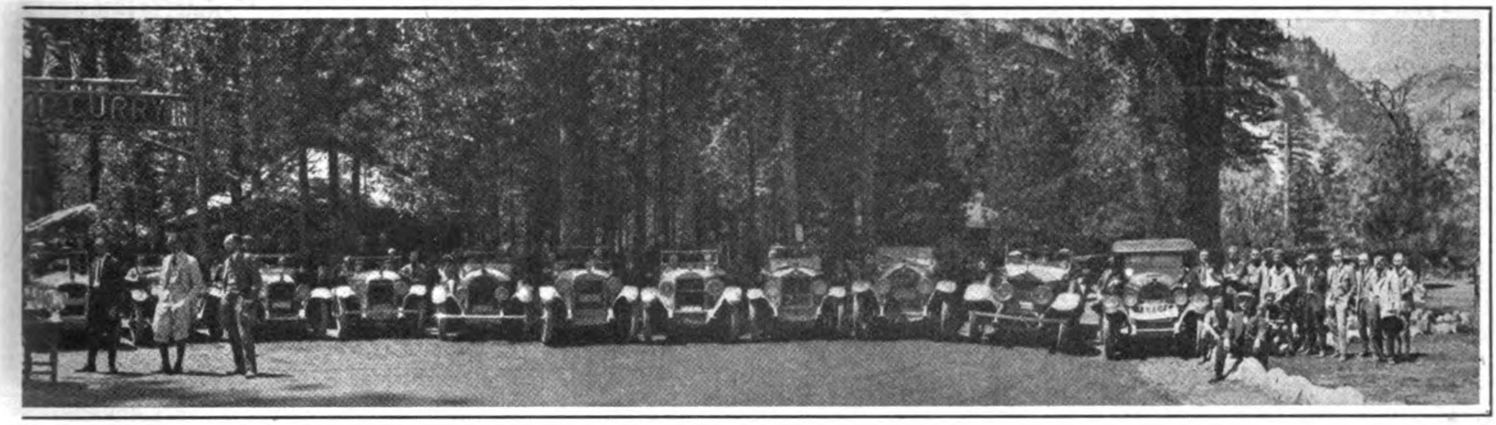
With a smaller field than that of 1921, this year's event may be considered the most successful since the initial run of 1917. Competition was closer than ever before, and the class winners found themselves crowded narrowly by the rest of the field. The factories' policy of building into their cars the utmost fuel and lubricating economy was shown strikingly in this run, and higher gasoline mileages were made. with road conditions extremely difficult. Last year's run, via Merced, was 40 miles longer, but on better roads. Of the 20 cars in the 1921

RESULTS OF SIXTH ANNUAL LOS ANGELES-CAMP CURRY RUN.

Car and Driver—	Weight.	Gas, gallons.	Oil, pints.	Water, pints.	Ton miles	Grand total.
Class 1-E—Under $800.						
Chevrolet, D. Basso	2790	12	1	12	41.85	
Class 2-E—$801-$1200.						
Earl, H. K. Tarkington	3420	12	1	7	51.3	49.05
Dort, C. F. Crank	3350	12½	1	5	48.24	
Gardner, A. H. Rogers	3540	13¼	0	5	48.09	
Maxwell, Frank Hosmer	3090	13⅞	1	3	40.08	
Class 3-E—$1201-$3000.						
Templar, L. S. Foulke	3600	14	0	2	46.28	
Ace, D. D. Skinner	3750	17⅛	4	8	39.41	
Class 4-E—$1001-$3000.						
Oakland, H. Nevinne	3360	12¼	0	2	49.37	49.20
Stephens, Fred Johnson	4340	15⅞	0	3	49.2	49.02
Kissel, N. U. Butters	4480	17¼	4	4	46.7	
Reo, Dave Fassett	4210	17⅞	0	2	42.3	
Liberty, D. H. Thomason	4130	17¾	0	1	41.88	
Jewett, Eddie Gates	3500	17⅝	7	0	35.74	
Class 5-E—$3000 up.						
Dorris, K. C. Purdy	5490	20⅜	0	2	48.5	48.4
Duesenberg, A. J. Shafer and Eddie Cleveland	4600	17⅛	0	1	48.35	48.29
Marmon, F. Albright	4910	25½	2	5	34.6	

SWEEPSTAKES WINNERS IN PREVIOUS RUNS.

Year	Car	Miles	Gross Weight	Miles Per Gal.	Ton-Mile Record
1917	Franklin Brougham	370	3450	21.8	37.6
1918	Saxon	382	3070	29.4	45.1
1919	Franklin	382	3470	29.4	49.9
1920	Overland	366	3460	36.1	60.74
1921	Templar	400	3840	26.6	51.20



THE CONTESTANTS AND OTHERS CONCERNED LINED UP FOR THIS INTERESTING PICTURE AT CAMP CURRY.

economy contest, only six entrants went the distance on less than 20 gallons. This year only two of the 16 cars entered needed 20 gallons or more. Figuring the averages of prospects for the sweepstakes cup at Camp Curry on the night of May 20, the judges found but .91 of a point separating the sweepstakes winner, and the leader in the fifth and heaviest class.

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Following is a complete table showing the number of miles per gallon made by each car:

Earl	30
Chevrolet	30
Oakland	29.3
Dort	28.8
Gardner	27.1
Stephens	26.6
Templar	25.7
Maxwell	23.9
Duesenberg	21
Ace	21
Kissel	20.8
Jewett	20.4
Liberty	20.2
Reo	20.1
Dorris	17.6
Marmon	14.1

—

The trip consumed two days, Friday and Saturday. The route was from Los Angeles, by way of the Ridge Route, Bakersfield, Fresno (where the night stop-over was made), Madera, Raymond (in the foothills), Grub Gulch, Wawona, to Yosemite Valley. From Los Angeles to Madera it was over smooth, speed-inviting boulevards, with a good country road leading off from Madera into the foothills. In dry weather the mountain roads are comfortable, though dusty in stretches, but a belated mountain rain of nearly an inch had fallen Friday night, and lay not yet absorbed upon the clay road composing the last leg—the really crucial portion—of the run, some 75 miles of very real mountain grades. Beyond Raymond the great majority of the cars stopped and applied chains, at least to the rear wheels. Once the worst grade of all, just above Miami Lodge, was passed, conditions improved, although there were many small streams to ford, and remnants of once mighty snowdritts margined the road in several places.

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From Los Angeles, elevation 250 feet above the sea, the route was, first, through the charming environment of Hollywood, over Cahuenga Pass and across San Fernando Valley to Saugus, elevation 1171 feet; then into the hills to the many majestic twists of the high Ridge Route to Summit, 4213 feet; then down through twisty Tejon Pass to Rose Station in San Joaquin Valley, elevation 1250 feet; north to Bakersfield, elevation 422 feet; northward through Delano, Tulare, Kingsburg, Fresno (elevation 350 feet), to Madera, 227 feet; then off northeastward from the main valley boulevard, through Raymond, 940 feet; past Point Hesitation to Grub Gulch, 2500 feet; majestic twists and grades on to Wawona, 4096 feet; Chinquapin, 6250 feet; then miles and miles more of twists, to the floor of Yosemite Valley and up that, between pillars and walls of gargantuan size and rare beauty to Camp Curry.

Starting from Fresno the second morning, there was a steady drizzle up the San Joaquin boulevard and off the route thence to Raymond. There, "Joe" Stephenson, A. A. A. representative, learned it also was raining in Yosemite Valley, from Superintendant Lewis of the park, who advised against trying to enter. He gave the same advice last year. Stephenson wanted to end the trip at Raymond. The Los Angeles Times' Studebaker went on, and the others followed. It was tough going—deep, slush-filled ruts. At 28 miles past Raymond all but one of the cars was stopped for tire chains. Some chains were found too short. One crew lengthened theirs by heatless blacksmithing, using a huge rock as an anvil; another used baling wire to connect; and so on. At Inspiration Point the sun came out, revealing the beauteous scenery and changing tints of Yosemite Valley in all their surpassing glory.

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That second day's journey was "some strenuous." Every physique felt it. If the shades of Hannibal and Napoleon, both of whom went over the Alps to Rome under difficulties, were hover-

THE FIVE CLASS WINNERS IN THE LOS ANGELES-CAMP CURRY ECONOMY RUN.

ing around they must have clapped their hands. George Retzer, former wrestling demon, who helped Bob Williams drive the Camp Curry scout car, an old Mercer of many symptoms, said at the finish he felt as though he had been trying to push over a county jail.

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On the grades above Miami Lodge and leading to Wawona, tire chains became the fashion, but one car, the Liberty, driven by D. H. Thomason, continued on at a chainless and thrilling pace. It exhausted one new rear casing with two punctures, tore the tread off another rear casing, caught the 3 o'clock control from Inspiration Point down into the Valley, and was the first contesting car to reach Camp Curry, but was not among the cup-receiving quintet Sunday morning, May 21.

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Added to the relief they felt at the end of the 10 hour grind on reaching the level floor of Yosemite Valley, with its myriad wonders, the travelers' hearts were warmed by the welcome showered upon them at Camp Curry by gray haired Mrs. D. A. Curry and her assistants. "Bob" Williams, assistant manager, accompanying the run and, having more than his share of the "mud-bucking" contest indulged in by all, did his utmost also to make the visitors comfortable. The camp that night, even before the judges had begun computing the scores, was en fete. There was a lavish entertainment, and a magnificent double "fire fall" streamed down the 3200 foot, perpendicular, granite face of the rock towering over the camp. Forgetting the stiffness and strain of hours of effort and tension, many of the drivers, observers and the numerous press contingent, joined in the "hard times" dance, for which they found no change whatever of garb necessary.

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The strong automotive tinge to the throng on the first night at Camp Curry was intensified by the late arrival of a number of dealers from San Francisco, Fresno and Merced, on a "sociability" run.

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Competition on the run was keen, the management in every way was excellent, a universal spirit of good fellowship and honest sportsmanship prevailed, and the judges' decisions, often made on very narrow margins, were accepted in good spirit. Official checking in for gasoline, oil and water consumption was under direction of George F. Stephenson, A. A. A. representative, and J. V. Smith, of the A. A. A. contest board. Hal F. Weller, newspaper and publicity executive of many years standing in California, acted as official manager of the run.

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Yosemite Valley, during the visitors' brief stay, was in one of its most glorious periods, with the flush green of late spring setting off magnificently the foaming white of the lofty cascades—Bridal Veil, Yosemite, Nevada, Vernal—that tumble into the valley; the rushing, snow-fed Merced River, which traverses its middle; the placid lakes; and the gigantic walls that practically form the horizon whichever way the eye turns.

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Times of departure from Yosemite were "as you please"; and the roads were found dry again, permitting fast and comfortable travel back through the mountains to the boulevards of the San Joaquin, where some headed north and some south, for home.

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One phase of the run yet hanging fire results from the unexpected stopping of 22 of the contesting and press cars on a high point of the Ridge Route by motorcycle police, on the charge of too much speed, practically at the outset of the tour. The travelers were informed that through their field glasses and by means of stopwatches the officers had observed the cars attacking the long, winding grades of the "Ridge" at 28 per instead of the legal 15 miles an hour. Protests of innocence were vigorous and sincere, but availed nothing, and the drivers of the cars stopped were directed to appear in court. There was carried away to Yosemite an unpleasant impression of narrow-spiritedness and lack of sportsmanship on the authorities' part.

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Economy of gasoline consumption was figured under the carefully planned method of the A. A. A. contest board, under whose sanction the run was conducted. The formula is to take the total weight of the car in tons, multiply by number of miles driven, divide the result by number of gallons of gasoline consumed. This gives the "ton miles" per gallon. The weight of the car includes a full gasoline tank, and four passengers in a 5 passenger car, or five passengers in a 7 passenger car, together with approximately 100 pounds of baggage.

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The press car contingent was a very numerous and noticeble feature from start to finish. The first car into Camp Curry, by the 3 o'clock control, a Stearns-Knight, donated by California Stearns Co., Los Angeles, driven by R. P. Pennock, of Acheson Oildag Co., carried Harry MacPherson, of the Pasadena Post and George W. Schell, of Motor West. Other cars were the Rolls-Royce, the first of that famous international make to enter the Yosemite; the radio-equipped Durant; the Buick; the Essex "Painted Flyer" (covered with a chain of scenic paintings of high merit); and the Stutz car, which served as the official vehicle, carrying A. A. A. men, judges, and contest manager. Very important also in the minds of all was the Reo Speedwagon, piled high with the travelers baggage, which for long stretches, on both valley boulevard and mountain grades, showed wonderful fleetness and easy handling ability, mingling with the contesting cars often on very equal terms.

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Honors for lubrication were split five ways on the class winners. The Chevrolet used Zerolene oil; the Earl, Pennzoil; Templar, Ventura oil; Oakland, the sweepstakes taker, Warren oil; and Dorris, a deflocculated graphite lubricant, Oildag.

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The Chevrolet ran on Miller tires; Earl, on Ajax; Templar, on Hewitt; Oakland, on Goodyear cords; and Dorris, on Falls tires.

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The Stephens in its close approach toward sweepstakes prize used 15⅞ gallons of gasoline, averaging 49.02 ton miles, compared with 44.41 ton miles in 1921, while its weight was listed as nearly 1000 pounds more than that of the sweepstakes winner.

—

The Kissel, driven by N. U. Butters, took third place in the field of five cars in Class 4-E, the largest class in the run. It outweighed all its classmates from 140 to 1120 pounds. It used 17¼ gallons of gasoline and made a ton mileage of 46.7.

—

The number of entrants was four less than in the run of 1921, when one car failed to finish the jaunt. With earlier runs this year's event compared still more favorably—1920 having had 17 cars, of which two were eliminated; 1919, 11 cars, one eliminated; 1918, 16 cars, one eliminated; and 1917, 14 cars, two eliminated.

—

Eight cars finished without need for additional oil—the Gardner, Templar, Oakland, Stephens, Reo, Liberty, Dorris, and Duesenberg.

—

In the second class, the Dort ran close to the winning Earl in gasoline economy, using 12½ gallons, or ½ gallon more. It was driven by C. F. Crank, appearing in an economy run for the first time.

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(See page 23, first column)

OILDAG AIDS CAR IN YOSEMITE RUN

Deflocculated Graphite Lubricant Is Used on Stearns-Knight to Reach End of Hard Drive.

Yosemite Valley lay restful and green under a late spring sun still high in the sky. The sheer granite walls rising from the valley floor on every side had not yet begun to throw their shadows, and Bridal Veil and the several lesser, but all majestic, falls and cascades, renowned in word and painting, fell white, ceaseless and silent in the distance, when a Stearns-Knight car, containing R. P. Pennock, of Acheson Oildag Co., Los Angeles, the driver; Harry MacPherson, of the Pasadena Post; Al. Hayes; and George W. Schell, of Motor West, passed the 3 o'clock control at Inspiration Point on the afternoon of May 20. It was the first car to enter the valley in the recent highly successful Los Angeles-to-Camp Curry economy run, May 19-20.

The car, donated by California Stearns Co., Los Angeles, carried a heavy crust of dry Sierra road clay on wheels, fenders and runningboards as testimony concerning the ordeal passed through since 7 o'clock that morning. For 70 miles, under the skillful manipulation of Mr. Pennock, it had pushed on through the dark, rain-soaked wilderness of pines, up a red-brown thread of road, where the mud-and-water mixture either stuck to the car or formed an endless chain of disheartening quagmires. Many cars, inbound and outbound, were met crawling painfully along, and several times the Stearns' passengers stepped to their shoe tops into the gluey morass and aided in setting other cars moving again.

But the trip was highly enjoyable withal, as the car's performance outshone even its fine reputation. Entering long grades, fording mountain streams, "squdging" through quagmires which could not fail to strike the tonneau passengers with momentary doubt, the sleeve-valve engine settled down to a quiet, deliberate rate of progress that rode over all obstacles. Contact between pistons, sliding sleeves and cylinder walls was lubricated by a highly efficient compound composed of deflocculated graphite suspended in oil, known as Oildag.

Graphite, deflocculated, is graphite reduced to particles so small that they cannot be seen with the ordinary microscope. Compounded with oil it is so light as to remain suspended indefinitely, and diffused evenly throughout a liquid lighter than itself. Placed in the crankcase it causes a graphoid surface to form on the rubbing parts of the engine; that is, a fine, strongly adhesive layer of the microscopic graphite particles is built up on the metal of the cylinder walls. Graphite as a lubricant was well known before the first automobile appeared, and with Oildag instances are being announced frequently of cars running as long as 60 miles on dry graphoid lubricating surfaces without any oil being used, or after the ordinary oil film has lost its efficiency.

As to engine operating temperatures at which Oildag would cease to lubricate, the Acheson Oildag Co., Port Huron, Mich., notes that before 450 degrees high grade lubricating oil flashes and burns; steel melts before 2900 degrees and becomes a vapor at 5000; but graphite is merely created in the Acheson electric furnaces at 7500 degrees. Oildag's inventor was discoverer also of carborundum, now in universal use. To obtain maximum efficiency and economy of car lubrication it is emphasized by the manufacturer that before using Oildag the piston rings must be functioning properly to form a seal against oil being drawn into the cylinders and being converted there into carbon.

The Stearns-Knight party was the first into Yosemite and the last to leave. It left Los Angeles on the economy run at 7.30 a. m., Friday, traveled somewhat leisurely but arrived at Fresno at 3 o'clock that afternoon, nearly an hour ahead of the other cars. It left Fresno at 6.30 a. m. next morning with the other cars, but arrived at Camp Curry before 3.30 that afternoon, nearly an hour ahead of any other economy run car. Its total running time was 14½ hours from Los Angeles to the camp. The homeward jaunt began Monday afternoon, the side trip to Mariposa Big Trees was attempted, but the road was found blocked by heavy mud two miles from the grove, a night stop was made at Miami Lodge, a new route was taken through Coarse Gold into Fresno next day, and Los Angeles was reached at 7:15 p. m. on Tuesday.

(Continued from page 22)

The Gardner bettered its 1921 record, using 13¼ gallons of gasoline, 3¼ gallons less than last year, and no additional oil, against 1 pint used last year. Its ton mileage was 48.09, nearly 6 ton miles better than last year.

The Jewett was the newest car in the run, in point of its introduction on the Pacific Coast. It has an unusually large engine for a 6 cylinder car of its wheelbase dimensions, yet it was the only car that did not require any additional water in the radiator.

Eddie Cleveland and A. J. Shafer alternated as drivers of the Duesenberg, another new car on the Coast, equipped with the Duesenberg engine of speedway fame, which displayed a thrifty side of its character by giving a ton mileage of 48.35, using 17⅛ gallons of gasoline, an average of 21.02 miles to the gallon.

Oildag
Stearns Knight
OILDAG

STEARNS-KNIGHT CAR WHICH OILDAG LUBRICATION HELPED RUN WELL IN LOS ANGELES-CAMP CURRY ECONOMY RUN.
Here are three views of the Oildag-lubricated Stearns-Knight car which carried the Motor West representative on the Los Angeles-Camp Curry economy run. The trio on the running board are George W. Schell, Al G. Hayes and Harry MacPherson. The center picture shows the car about to leave Camp Curry for the run home. On the right is shown Purdy, the driver of the winning Dorris car, taking his matutinal eye-opener of Oildag from the cup which he won. R. P. Pennock, who drove the Stearns-Knight, took the pictures.

WAYFARER III IS A VERY USEFUL CAR

Interesting Facts About the American Automobile Association Official Scout Machine's Equipment.

George—or rather Dan—is doing it. We, the people, know many things are being done for us, but much happens so swiftly that we do not note them enough to be appreciative.

How many know, for instance what is being done in the way of transcontinental motor route finding and information gathering?

On May 1, Wayfarer III left St. Francis Hotel, San Francisco, for New York, where it was due May 20. It was piloted by Dan J. Nee, and the trip was his fifteenth annual one.

The send-off was notable. It was attended by committees from various civic organizations and business clubs. On leaving, Nee was handed a letter from Mayor Rolph of San Francisco to Mayor Hylan of New York, a general letter of invitation to Easterners to attend the Shriners' convention to be held in San Francisco in June, and a letter from President Wallace M. Alexander of the San Francisco Chamber of Commerce to W. F. Morgan, head of the Merchants and Manufacturers Association, of New York.

The Wayfarer, in addition to being the American Automobile Association's official scout car, is the accredited representative of the California State Automobile Association, and the National Park Service of the Department of the Interior.

Dan J. Nee, the pilot, is perhaps the best posted man on roads and road conditions in the United States, and the information he has obtained on transcontinental trips has been of immense value to motorists throughout the country.

The Wayfarer is a specially built Locomobile. It is equipped for the hardest kind of road work and pathfinding, and is claimed to be the world's most elaborate and completely equipped automobile. It is furnished with compass, grade meter, altitude meter, thermometers which record the temperature both inside and outside of the car, and instruments for map making and checking of mileage and grades. A specially made road recording instrument is used in making a complete road log of the trip, and road notes. The dials of all instruments are radium treated and read easily at night without the use of electric lights.

California is well represented on this year's car, with three new inventions, namely: the McClure electric oiling system, the Heath siren, and Holden air shock absorbers.

The McClure electric oiling system provides means for lubricating the entire chassis instantly and completely by merely pressing an electric control button, placed conveniently on the steering column. It is stated this system is simple and positive. It operates whether the car is traveling or standing, and its efficiency is not affected by mud or water.

The Heath siren, constructed on a new principle, is driven electrically and has a sound carrying power that reaches over three miles.

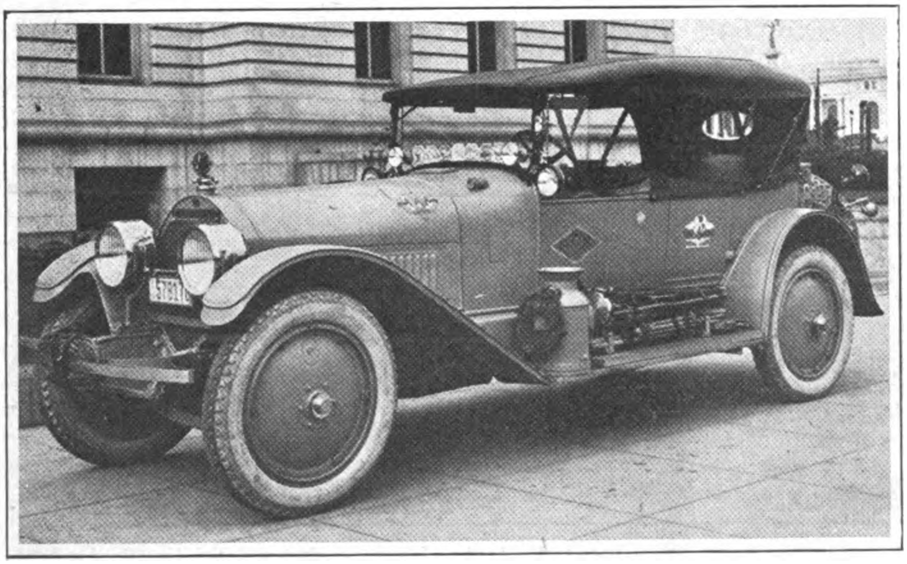
Holden shock absorbers have the air principle in their construction, and it is claimed they are especially suitable for the hard service called for on a transcontinental trip.

The car can be driven caterpillar style over sand and bad roads when necessary, by the attachment of endless belts which run on rollers, attached underneath the running boards. Specially built jacks are carried which have an extension of 5 feet, and these may be used for lifting, pushing or rolling the car.

An extra lubricating oil tank is installed under the fender and the crank case can be filled by means of compressed air while the car is in motion.

The condition of the storage battery is shown at all times on a dial which indicates whether the battery is over or under charged and gives warning when the water in the battery runs low. Special headlights throw a beam of light 1500 yards, spotlights operate through the windshields, and electrically driven windshield cleaners provide for clear vision under all weather conditions.

The car carries a complete stereopticon outfit which is used for showing color slides of the various national parks, national monuments, and the points of most interest along the national highways. This means of bringing to the people of America a better understanding of the scenic beauties of their own country is one of the primary objects of the transcontinental journey. All the slides shown are from photographs made by Nee, and he therefore supplies proof of the accessibility of the scenic wonders shown.



WAYFARER III, SCOUT CAR OF THE AMERICAN AUTOMOBILE ASSOCIATION.

Wayfarer III, official scout car of the American Automobile Association, left San Francisco May 1 for its fifteenth annual transcontinental tour. In addition to other special equipment it is fitted with three new inventions—the McClure oiling system, Heath siren and Holden air shock absorbers.

Durant Pioneers to Salt Lake.

A Durant Six pioneered its way to Salt Lake City in two respects. Al Waddell, advertising manager of Durant Motors, Oakland, wired from Salt Lake, May 25, saying it was the first car over Goodyear Cutoff "on its own power" to Salt Lake City this season; that the road would not be open for three weeks and was believed impassable, but the trip from Goldhill, 150 miles, was made in 10 hours.

"The car is a wonder and is seen for the first time in Salt Lake. Attracting much attention. Governor and prominent citizens giving us a luncheon Friday. Starting back over Victory Highway at daylight Saturday."

Buy Large Accessory Business.

Wood, Vallance & Leggatt, Vancouver, B. C., one of the largest automotive accessory and hardware concerns on the Pacific Coast, has been bought by Marshall Wells Co., Duluth, which has taken full charge.

Two More Board Tracks Planned.

Two more board tracks, one in Denver, one in Newark, N. J., to be built by Jack Prince, are planned.

REALTORS SEE OUR SCENIC SPLENDORS

Delegates From All Parts to National Convention in San Francisco Go Up by Road From Los Angeles.

They saw California in its most glorious aspect—the 700 or more who assembled in Los Angeles from every part of the country and from Canada, and left early Monday, May 29, in cars supplied by automobile trade men and other hosts, on a 500 mile trip as delegates to the national convention of realtors which opened in San Francisco May 31.

On splendid boulevards, through a riotous wealth of flowers, groves and magnificent scenery, the vastness of which must have stunned many of them, they went half way, to Fresno, the first day. The wonders of the high Ridge Route enthralled them. Beyond, near Bakersfield, the little town of Arvin stopped the caravan and said it with bouquets, raisins and nuts. At Bakersfield, Spanish-clad girls served a barbecue luncheon in a park. Music, and more flowers; and about 50 Bakersfield cars joined the tour. Through the orange, grape, grain and other districts of famous San Joaquin Valley went the miles. Far to the east and west, hazy in the distance, lay gigantic ranges of mountains, their slopes weirdly crazy-quilted by sunlight and cloud shadows.

The leaders reached Fresno at 5:30, the tail-enders about 8. In the grounds of Associated Raisin Co. a basket supper was spread. Then a musical program, in the glamor of a soft summer night.

Next morning many Fresno cars got in line. Others did so at Madera, Merced, Modesto, Turlock, San Jose. From San Francisco a cavalcade came down the peninsula to escort the visitors in.

Two Moreland trucks, made in Los Angeles, carried the light baggage. Automobile Club of Southern California supplied a blanket insurance policy, and maps.

Accessory Men's Hopes Higher.

Business conditions in the automotive accessory and hardware field on the Pacific Coast, from Canada to Mexico, are much improved, finds T. A. Mitchell, well known manufacturers' representative, and head of T. A. Mitchell Co., San Francisco. He recently made a lengthy business trip, taking in Portland, Seattle, Spokane, Billings, Denver, Salt Lake City and Los Angeles. Special awakening is shown in the Pacific Northwest, also in Montana and Colorado. Customers are buying conservatively, but are decidedly willing to place orders on all staple lines, a feeling he found lacking on his previous trips. In one instance a buyer remarked that the quantity that some time ago lasted him 90 days does not fill his needs for more than 30 days at present. There are still those who complain, of course, but a much brighter hue now tinges the accessory dealer's horizon, states Mr. Mitchell.

It Came From Standard Oil.

One of the most pleasing publications Motor West receives is Standard Oil Bulletin, issued monthly by the company's advertising department in San Francisco. In both text and pictures, it is rich with the human touch, and the color process cover reproductions of first class drawings or paintings are superb. An orchard in full blossom, with a blue motor car sweeping through on a fine road, was a recent subject; and inside was another orchard scene, including a tractor. Motor West borrowed the photo, used it—and forgot to give due credit, which is done here and now.

> **A SIGN EXPLAINED.**
>
> **The one outwardly adverse factor which has developed during this spring is the failure of the retail trade to meet expectations. This has tended to raise doubts in the minds of some business men, and it has even produced a condition of extreme discouragement in some areas of the country, the industries of which are particularly dependent upon the ultimate consumer.**
>
> **Discouragement is not justified, however. On the contrary, the retail situation should be regarded as a favorable symptom. As long as the consumer continued to buy without restraint, it is obvious that retail prices would not decline in keeping with the decline of wholesale prices and prices of raw materials. Falling retail prices mark the last stage of the depression, and retail trade and related industries must now await recovery in basic industries.—National Bank of Commerce, New York.**

Apperson on Fast Coast Trip.

On May 10 M. J. Gentry, with four business associates, left Portland in a 4 passenger Apperson, 1918 model, and kept tabs on time, etc. The relatively rough stuff was left behind at Sacramento and Los Angeles, about 1250 miles, was reached in 37 hours 50 minutes of daylight driving, averaging 33 miles per hour, this including stops for gas and oil but not for meals. The return trip was made about as fast, round trip time for the 2500 miles being 75 hours 50 minutes. The gasoline average was a gallon per 16.8 miles; oil 978 miles per gallon.

A SIMPLE WAY TO CLEAR AWAY SNOW

Mono Lake Man Says Sanding Reduced Depth on Eastern California Road Four Feet in Five Days.

There is talk of clearing snow from roads in the High Sierras and other mountains in the Pacific region, by means of rotary plows.

Instead of that, suggests Wallis D. McPherson, of Mono Lake, Calif., scatter sand, like seed, on the snow at night, when it has a hard surface, and let Nature do the rest. In daytime the sand absorbs heat from the sky, transmits it to the snow, and the snow melts.

In Los Angeles, recently, Mr. McPherson told of an 18 mile walk he took on the deeply buried road toward Bridgeport. About 8 miles of the distance had been sanded as described, resulting in the depth of snow decreasing as much as 4 feet in 5 days!

Residents of the region had dug holes in the snow to the roadbed, taken out sand, and scattered it, some of them traveling on skis. A better way, Mr. McPherson said, would be to pile sand at various points each autumn and scatter it immediately after snowfall ends, each spring.

Tioga Road is the way from the east side of the Sierras to Yosemite National Park. It saves a detour of hundreds of miles. Mr. McPherson said that if this important road had been sanded two months ago it would be clear of snow now, and that if it were sanded now it would be clear a month earlier than it will be otherwise.

The method has been used in Eastern California many years. Apparently it would not only be a money saver, but could be applied by a large force of men, over a large mileage and area, at one time.

That the state highway commission will consider the suggestion is doubtful. Why? Well, instead of considering the use of hard volcanic material, available in unlimited quantities, in Eastern California road construction, it intends to transport to the region cement concrete, which close observers say will be much more expensive, much less durable, not as desirable as the volcanic rock in some other respects.

Mr. McPherson's suggestion reminds Motor West of a New Mexico engineer who made the wind make roads. On highway routes, trenches many miles long were dug in the rather soft soil. The wind scoured them down to the hard subsoil, and widened them.

Most cars have quit smoking.

ANOTHER CASE OF COAST INITIATIVE

Security Mfg. Co. Makes Rapid Progress by Filling a Pacific Region Need of Good Replacement Parts.

Here is another striking example of Pacfic Coast automotive development.

Even until a few months ago, getting the right bolt, or other part, for a job in hand, was a problem, due to the motor car factory being thousands of miles away and, too often, the desired part not being in stock at the time in the distributor's establishment.

Within the past few months that problem, as far as the Coast region is concerned, practically has been eliminated as to spring bolts, motor valves, tie rod bolts, king pins, bushings, piston pins, and so on; and this is why:

In December, 1920, Security Mfg. Co. took over the patents issued to Miller-Chapman Co. in 1916, and the Miller-Chapman plant at 1047 West 16th St., Los Angeles. The patents were on the Security automobile theft signal, which is placed around the wheel and tire and which works so well that, though more than 2900 automobiles were stolen in the city and county of Los Angeles last year, not one was stolen that was equipped with this device.

The Pacific region alone, while very large, was not deemed sufficient for their ambitions by the men composing Security Mfg. Co. They are men of ability and experience, fit for big business. So they sought additional outlet for their energies, and found it in the fact that a very large number of jobbers, dealers, repairmen and car owners in the Pacific region were suffering much inconvenience for lack of adequate high quality replacement parts and service.

They undertook to supply that service, beginning, as stated, only last autumn, and already they believe their line (accommodating 95 per cent of all types of motor cars in use), is the most diversified in the region, and that no other line is so completely tabulated for easy ordering.

Since last autumn, Security Mfg. Co. has expended about $90,000 in remodeling and newly equipping its plant, and now it is considered to be the most complete plant in California. Response was immediate, and equipment is continuing so that when the company's stocks are completed the investment will amount to about $250,000.

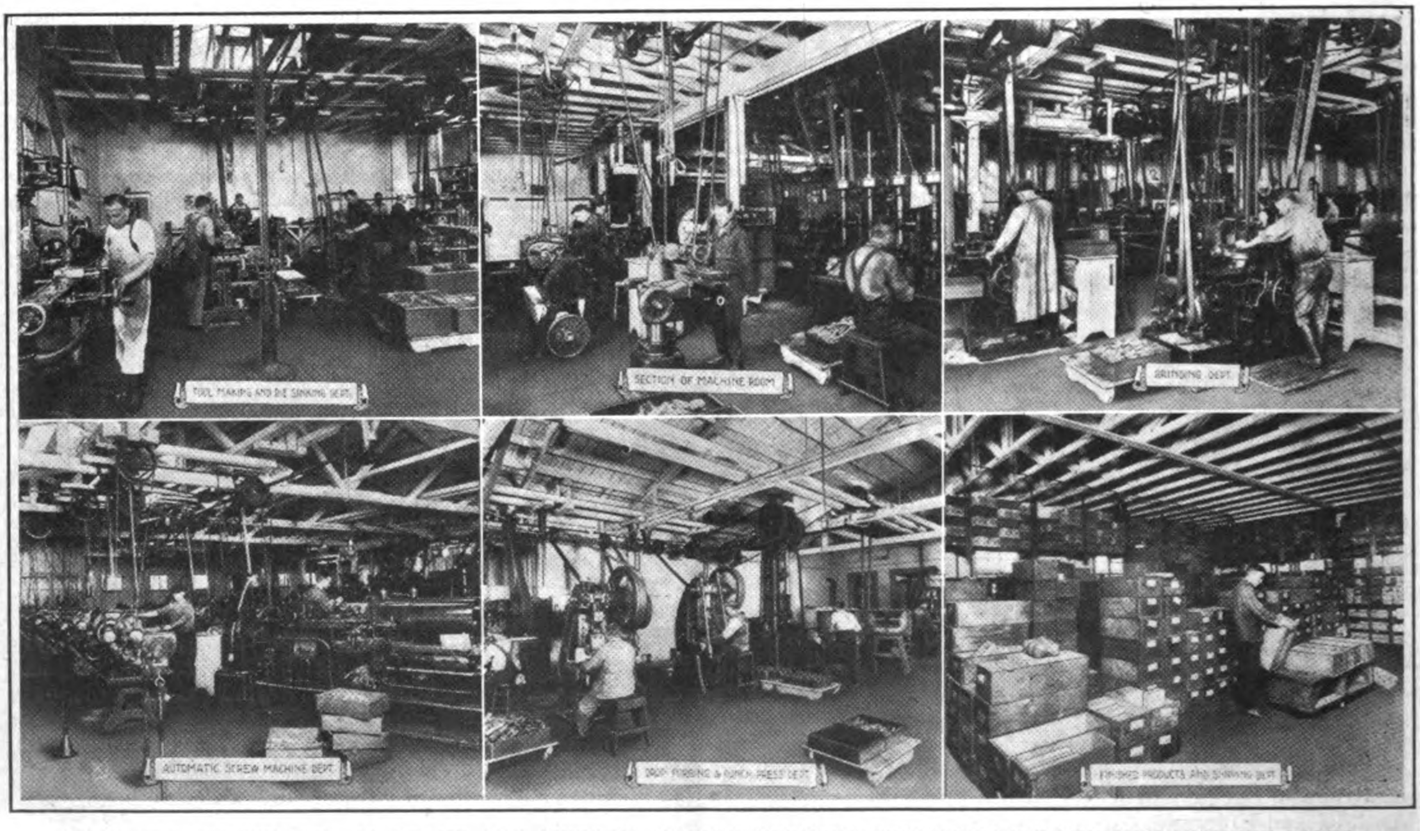
A Motor West man, somewhat familiar with large Eastern plants of the kind, visited the Security establishment and found it remarkably well lighted, clean, well ordered, and fairly humming. Production of spring bolts alone is taxing the equipment of this department to capacity, though the first circular letter was sent out only last February. Bolts for all popular makes of cars are now ready. Printed matter soliciting tie rod bolt orders were being sent out when the Motor West man's call was made. As to piston pins, the company expects to turn out nearly half a million in the next six months. The plant is to work day and night.

Motor West's representative observed two huge automatic machines being taken into the plant. These additions will make a battery of eleven of these machines, ranging in capacity from 2½ inch down to 3/16 inch. The heat treating plant will have a total capacity of 8 tons per day of finished material.

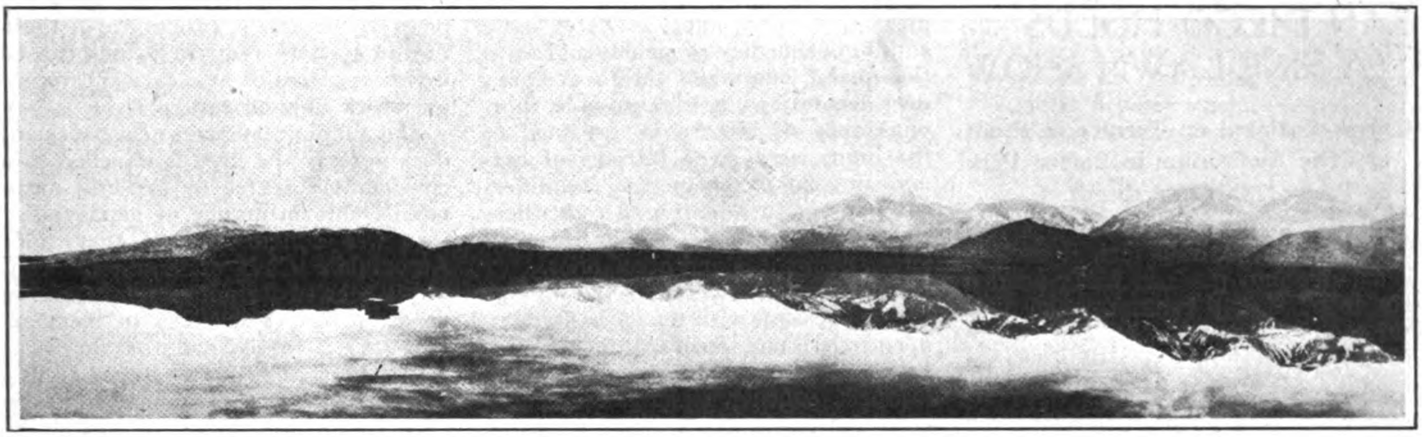
All materials and workmanship are of the best. The spring bolts, for instance, are made from solid bars of the proper grade carbon steel, double heat-treated to provide hard wearing surface and tough core. It is claimed the thread accuracy, the cotter pin drilling and the knurled underhead make this bolt a perfect replacement part, equally effective for oil or grease lubrication; and a special chart makes it easy to order; insures getting the right bolt for the right car.

The company's research work has been, and is, most thorough. The best examples of each kind of part obtainable in this country, even abroad, have been studied, improved upon in design, material and making, and comparative bending and other tests have shown most pleasing results.

Heat treatment is a science. It is


TOOL MAKING AND DIE SINKING DEPT.
SECTION OF MACHINE ROOM
GRINDING DEPT.
AUTOMATIC SCREW MACHINE DEPT.
DROP FORGING & PUNCH PRESS DEPT.
FINISHED PRODUCTS AND SHIPPING DEPT.

VIEW IN SECURITY MFG. CO. PLANT, LOS ANGELES, MAKING SECURITY THEFT SIGNALS AND REPLACEMENT PARTS.



ONLY IF MUCH ENLARGED WOULD THIS MONO LAKE PICTURE SHOW THE BEAUTY OF THE SCENE ADEQUATELY.

The above picture is a mere miniature of what was revealed in a very much larger photograph, the prized possession of Wallis D. McPherson, who set his camera on his 1400 acre island in Mono Lake, which lies close to the east end of Tioga Pass, through which Tioga Road enables one to reach the eastern entrance to Yosemite National Park. Mono Lake, one of Eastern California's highly mineralized bodies of water, has been called by experts the world's greatest mirror. Crater Lake, in Oregon, is a marvel, but Mono shows between 200 and 300 miles of perfect reflection. Its name is Indian for beautiful. From Mr. McPherson's island, about 3 miles off shore, one looks at the left across another island, named Mono Craters and called the Vesuvius of America by I. C. Russell of the Geological Survey, who says the lava flow on the island is the most recent in the country except that on Mount Lassen in Northern California. Continuing to the right from Mono Craters, one sees Mount Ritter, Barker Peak, Bloody Canyon, Mount Gibbs, Mount Dana and Tioga Pass.

said the Holt tractor works, in Stockton, Calif., and the Hall-Scott motor works, in Berkeley, are among the foremost in heat treatment development; and the man who till recently was in charge of that department for Holt Mfg. Co., J. W. Cook, now is with Security Mfg. Co. He is recognized by metallurgists and chemists as one of the leading authorities on the subject on the Coast.

All materials used are strictly according to S. A. E. specifications, and are subject to analysis under supervision of George Effinger, formerly chemist for Union Tool Co., Torrance, Calif., and who came from Inland Steel Co., Chicago.

The reputation of the Security plant has become such, even in so short a time, among metallurgical and mechanical students, and those who have any doubts as to how to handle steel, that its facilities and knowledge are sought eagerly. The fact that in the same plant, and under the same supervision, it is possible to get drop forging, heat treating, automatic screw machine work, electric welding, enameling, die sinking and tool making and, in addition, a complete shop equipment of the most modern type, has earned for the plant the term, "The most complete in California."

To anyone in the industry, whether distributor, agent, salesman, service man or mechanic, it would be highly instructive to visit this plant and see how things are made, because things can be seen in the making, from raw material to finished products, and the men back of this establishment know how and why and are always glad to "show the other fellow."

O. M. Braneis, shop superintendent, has come through the various stages of automotive development, from a tester in the old Stoddard-Dayton plant, and then in various executive capacities with other progressive concerns, and brings to Security Mfg. Co., the benefits of a well-rounded experience.

R. B. Dunsmore, plant manager, is a veteran in the machinery line and manufacturing. He came to Los Angeles in 1905 as vice president and manager of the largest distributor on the Pacific Coast of machine tools and factory equipment, and for many years was associated in an executive position with Union Tool Co., Torrance.

L. A. Coffey, treasurer, handles the finances, sales and other executive duties. He also is a veteran in his line through his association with leading financial interests.

It is a case of men of ability, and a fine opportunity; of bold initiative, and quick response thereto; of a remarkable growth, the rapidity of which proves there has been real need of it.

Veedol in Larger Quarters.

Increased demand for a lubricant of quality that will hold up under the terrific heat conditions in the average automobile, truck, or tractor, has necessitated the removal of Tide Water Oil Sales Corp., San Francisco, refiner and distributor of Veedol motor oils and greases, to larger quarters at 440 Brannan St., where F. M. Rowles, Western department sales manager, and C. H. Stuart, Western department advertising supervisor, now have their headquarters. The company is also located at ten other Pacific Coast points, extending from Spokane to San Diego, giving ample facilities to dealers up and down the Coast to keep in close touch with the source of supply.

Veedol is a Pennsylvania base lubricant, refined under the exclusive Faulkner process, and is brought to the Coast by boat in containers filled and sealed at the Tide Water refinery at Bayonne, N. J. The seal is not broken until delivered to the buyer, assuring delivery of a real Pennsylvania base motor lubricating oil.

Oregon Hospitality.

Motorists coming into Oregon from the south on Pacific Highway will be welcomed at Medford and given all possible assistance to make their touring in Oregon pleasant, by a branch of the Oregon State Motor Association, which operates in Western Oregon and has headquarters in Portland. Medford is the first town of importance touched in Oregon when coming north over Pacific Highway, and is the gateway to Crater Lake National Park, Oregon's national playground.

The new Medford bureau will have all the facilities in the way of maps, road data, etc., that the usual bureaus have, and will co-operate with the California associations, allowing interchange of privileges to members.

Not only will the branch be of service to those coming into Oregon from the south, but it will be of particular importance in directing motorists to Crater Lake and providing them with information and assistance in making the run to that beauty spot, which opens its season on July 1. The branch is in the Medford Chamber of Commerce building, J. E. Hazelrigg in charge.

Late Showers Fall on Coast.

On May 18—unusually late in the season—Los Angeles was wet by a good shower. Next day most of the state also had rain. It simply made most things, still ripening, to grow more.

Watch your brakes and signals.

SAN DIEGO HOLDS A FINE LAWN SHOW

Canvas-Enclosed on Terrace in Front of Civic Auditorium in Balboa Park as Part of Shriners' Circus.

From a grave of gloom, it revived and burst into glorious being amid a bower of spring verdure. The 1922 automobile show of the San Diego Motor Car Dealers' Association opened Monday, May 15, and ended Saturday, May 20, in a spacious, canvas-enclosed part of the terrace that fronts the new Civic Auditorium in Balboa Park. It was a striking feature of the Shriners' indoor circus and mardi gras.

Revival of the idea and decision to hold a show was sudden, after all plans had all been vetoed and shelved. It is said to be due to the new administration elected on the "young blood" ticket recently. Louis C. Maire, manager of the J. W. Leavitt Oldsmobile branch, and new president of the San Diego association, scheduled the event as one of his first official acts.

The exhibit was in the open air, set in picturesque, shrub-decked surroundings, with special lighting effects and a continuous medley of melody adding to the quaint ensemble. With Nature's own decorations as backgrounds, thoroughbreds of motordom, groomed to the limit, were given settings of harmonizing color schemes in the different nooks. In addition to cars, there was everything that is new in tires, batteries, equipment and accessories.

San Diego's social set took advantage of the occasion with tea-dansants, dinner-parties, and frequent motor-marketing inspection tours.

Music, dancing, singing, radio concerts nad comic stunts under the direction of the "GOOFS" (Grand Order of Friends), San Diego's baby booster club, were features.

President Maire predicts a 50 per cent increase in business in three months, for every exhibitor, as the result of the show.

Insurance Reduction Offered.

Pacific Coast Automobile Underwriters Conference, headquarters San Francisco and meaning a group of insurance companies, is urging motor car owners to take advantage of reductions in premiums, due to reduced recovery possible in case of fire or theft, due in turn to reduced values caused by lower prices of new cars and recent overstock of used cars.

The announcement in newspaper ads does not say the urge is impelled to a considerable degree by low-cost automobile club insurance of members.

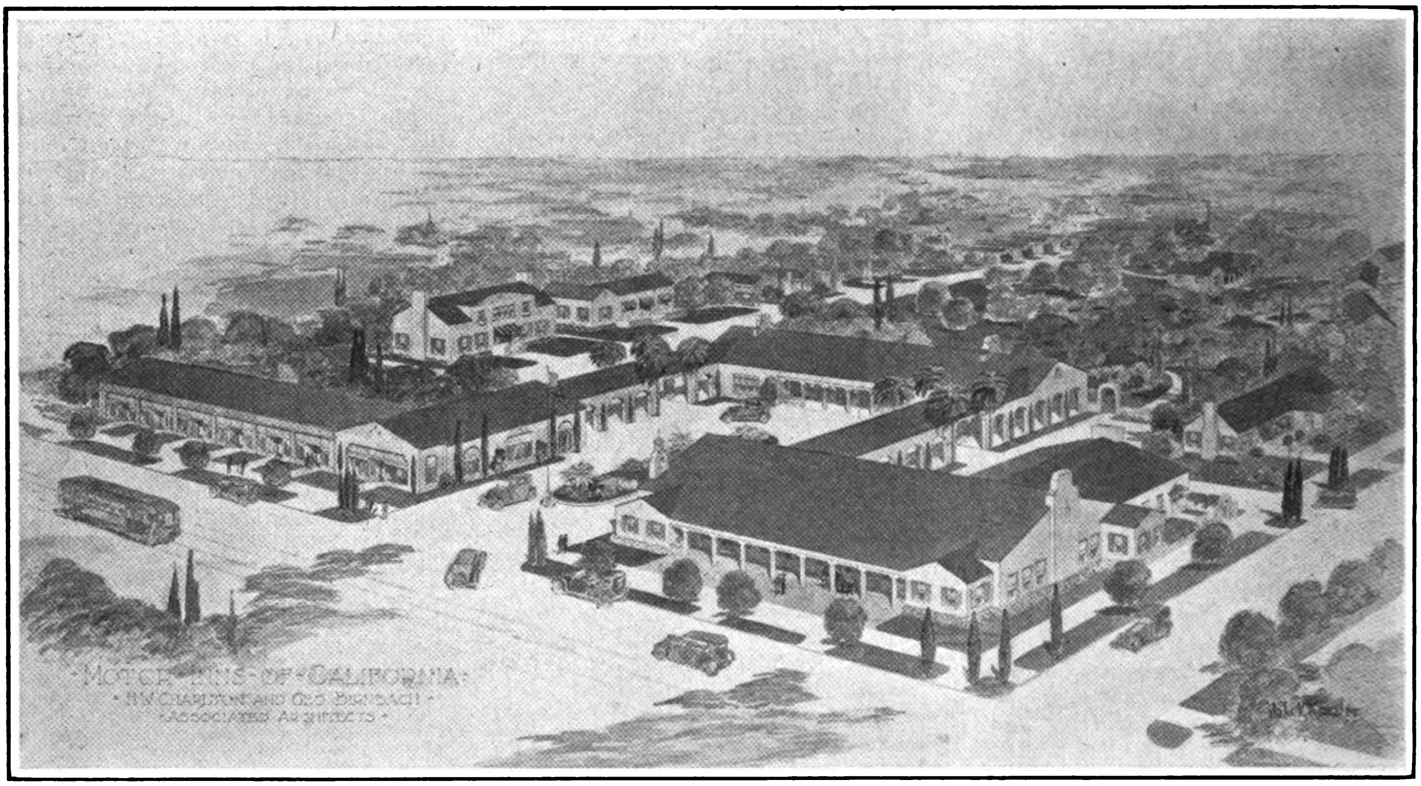
It was stated recently that since Automobile Club of Southern California started its non-profit insurance department it had saved to members $1,689,277. In 1920 the saving was $280,684; in 1921, due to increased use, $519,642. Return premiums alone, in 1921, totaled $143,517.

Cars in Anaheim Orange Show.

The second annual California Valencia orange show opened in Anaheim May 23, ending May 30. In a tent of 25,000 square feet of area, motor cars, trucks and tractors, plus accessores, were shown.

Keaton to Wholesale Only.

Keaton Tire & Rubber Co., Los Angeles, announces it will wholesale only, henceforth, and for retail purchasers submits a list of firms handling its tires, tubes, rims and rim parts.



MOTOR IN TO YE MOTOR INN! A MOTOR WEST MAN HAS SEEN THE FIRST ONE AND FOUND IT SURPRISINGLY GOOD.
As mentioned before in Motor West, a Mr. Brill originated the plan which resulted in incorporating Motor Inns of California, the idea being something like the bungalow courts so numerous in Los Angeles, but especially adapted to the needs of touring motorists who want neither the crudities of municipal camps nor the fuss-and-feathers of hotels. Mr. Brill is out of it, L. W. Bosserman is at the head of it, and not only is the 5½ acre site in Los Angeles, indicated in the picture, partly equipped with bungalows and garages that are filling a real need most pleasantly and economically, but the full complement of buildings indicated is to be erected immediately. It includes a dinner-dance hall on one side of a sort of magnified pateo entrance that faces on Whittier Boulevard, one of the chiefly traveled ways in and out of Los Angeles. On the opposite side of the pateo or court yard will be small shops. Here, for a mere $2 a night, two persons are given a neat, clean, well lighted and heated bedroom with private bath, hot water (really hot), individual garage, individual gas stove and kitchen locker in a community kitchen, they supplying nothing except as to one item—dishes. The reason for that is—experience. Mr. Bosserman has bought 4 acres near the center of Fresno, for a similar establishment there. His wife, a charming and capable woman, manages the one in Los Angeles, which already has received illustrated attention nationally and even in a prominent English motoring journal, and which, when completed according to the plans of a prominent architect, is expected to be an example which will result in revolutionizing the housing phase of motor touring. It combines comfort, beauty, isolation or company as desired, economy for the guest and, apparently, profit for the host.

PORTLAND REPORTS SHORTAGE OF CARS

Truck Market Still Rather Dull but Improving—Tire Dealers Organize for Better Co-operation.

Talk about a possible shortage of automobiles has not been rare in the Portland district for the past year or more, but in most cases the talk was without foundation, and came to be regarded as the old familiar cry of "Wolf, wolf!" But at last a real shortage is developing. For the first time in many months dealers are reporting virtually no cars in stock, despite efforts to keep supplied, and are accepting orders subject to arrivals from the factories.

It is another way of saying that the automobile business in Portland, at least for all the better known lines, has improved markedly in the last several weeks and is now what might be called normal, if the business of the old days of 1919 can be called normal. Many dealers date the resumption of buying from the first of March, and practically all are agreed that that month was the turning point. March was an excellent month, April was just as good and in some cases better, and May promises to outdo both.

Not only has the retail situation in Portland improved greatly but the wholesale market also has opened and orders are reported as coming in substantially from Eastern and Central Oregon, districts which have not bought cars for practically two years. In fact one dealer called the present period a time of making two years' sales in one.

The truck market has continued rather dull. However, the truck men are not pessimistic, as steady improvement, particularly in the lighter commercial cars, has been noted. Important development of the truck market is expected in the late summer and fall, when agriculture and various other businesses just now getting back on their feet are going in good shape again.

The Portland Tire Dealers' Association was formed recently. Jack Fletcher of Fletcher & James, is president; A. L. Steele, of Western Tire Sales Co., vice president; and Martin F. Swift, of Howell-Swift Tire Co., secretary-treasurer. Members of the board of directors are the officers and George K. Cassidy of Cassidy Tire Co.; W. L. Powell, of General Tire Co.; Seth Leavens, of Leavens-Howard Co.; and J. C. Burch, of Pacific Tire & Supply Co.

The objects are to promote a better feeling among tire dealers, many of whom have been anything but friendly towards each other in the past, and to correct some existing evils in selling practices. Only those men who are in the tire business exclusively or whose major business is tires are eligible to membership. The association expects to affiliate with the national tire dealers' body. Meetings will be held monthly and judging from the enthusiastic membership with which the organization starts, a useful and active career is ahead.

Portland has been designated as a factory branch distribution point by Federal Rubber Co., and a warehouse has been opened. A bulletin by the company says the phenomenal increase of Federal tire business throughout the Pacific Coast has made it virtually impossible for the San Francisco branch to handle the entire volume, and the Portland branch will care for the Pacific Northwest. The new branch is located at 428 Flanders St., Portland.

THE NEW DAY.

We are in a wonderful period today—a period where order-taking methods have been thrown into the discard. We are in a period where the most intensive sales-planning and the broadest sort of co-operation are having their reward. We are today surrounded by unmistakable signs of a slow, healthy growth—fathered by the most intensive selling effort the world has ever experienced.

The automotive field is quick to reflect economic conditions. Our own business for the first quarter of 1922 is a very satisfying indication that business can be obtained—if you'll only double your selling effort and go after it.—Lon. R. Smith, vice president, Midwest Engine Co.

Expansion of Oldsmobile Co. of Oregon, Oldsmobile distributors throughout that state, with main headquarters in Portland, is completed, the capital stock being increased and two employes being taken into partnership. Under the new arrangement E. E. Cohen, founder of the company, continues as president and general manager, while Arnold Cohen continues as treasurer and assistant manager. The two new members are J. R. Chamberlain, who becomes secretary and office manager, and William Anderson, who becomes vice president and mechanical superintendent.

Lee Odgers, one of the best known Ford sales officials in Portland and several years sales manager of the Portland branch of W. L. Hughson Co., has joined the force of Robinson & Smith, authorized Ford agents of Portland, where he will do special sales promotion work. Mr. Odgers claims an acquaintance of more than 4000 Ford owners in the territory. He purchased his first Ford in 1907, and has been driving one ever since, although he denies that it is the same one.

J. J. Miller is announced as sales manager of the Willys-Overland Pacific Co. branch at Portland. Mr. Miller takes over the retail reins. He replaces W. (Bill) Byrnes, who has joined the Covey Motor Car Co. sales force. Mr. Miller for seven years was with Simon Sales Co. of Detroit, Overland and Willys-Knight distributors for Michigan, and recently moved to Portland. For two months prior to his promotion he was on the local Willys-Overland sales force.

Spokane Trade News.

In Spokane, the Fancher & McNairn Co. has been formed by C. H. Fancher Jr. and E. McNairn to distribute Goodrich solid and pneumatic tires in the Spokane territory. During the last four years Mr. Fancher has been associated with the Marsh-Strickle Motor Co., as manager of the Federal truck department, and in 1909 and 1910 was with the Cadillac and Locomobile car agencies. Mr. McNairn introduced the first Sewell cushion wheels in Spokane and until recently was associated with the McGoldrick Garage. Before coming to Spokane two years ago he was traveling representative for the Pierce-Arrow Motor Car Co. His experience in the passenger car and truck business dates to 1910. He was the first mechanic to invade South America in the interests of Ford Motor Co., having gone to Buenos Aires in 1912.

Motor Supply Co. has been incorporated in Spokane by Charles Durkoop, to handle motor parts, and has been established at 1125 First Ave., Spokane. The company has been given the exclusive distribution in the Pacific Northwest of Kant Skore pistons.

Twenty-five Oakland automobiles, model 34-D, were received by the Spokane branch of the Oakland Motor Car Co., May 20, according to L. G. Bellinger, manager. The shipment included touring cars, roadsters and sedans.

Maxwell-Chalmers Corp. has entered into a contract at Spokane whereby the Maxwell will be handled by the Logan-Grant Co., which since 1915 has distributed throughout the Inland Empire approximately 1500 Chalmers cars.

Lee W. Bennett, engaged in the automobile business in the vicinity of Spokane for 10 years, has become manager of the wholesale department of Culton, Moylan & Reilly Auto Co., the well known Chevrolet automobile distributors.

BAY CITY GETTING SET FOR SHRINERS

June 12-15 to Be Gala Days at Golden Gate, Including Racing—Changes in Leading Trade Concerns.

Automobile distributors in San Francisco, forming the automobile committee, William L. Hughson, chairman, in charge of preparations for the entertainment of the thousands of Shriners who will throng the city in June, have made a vigorous appeal to the city's great car owning population for the loan of 7000 automobiles. This is being answered to a very satisfactory extent, from all indications. Owners are registering their cars with the automobile committee and receiving official stickers which inform the world at large that such cars are already bespoken for the transportation of the visitors during the proposed 25 mile scenic tour around San Francisco, and in the great parade through the business district.

The convention lasts from June 12 to June 15. A tremendous throng of automobiles and pedestrians is expected to congregate in the business district during Shriner parades and special ceremonies, and Chairman Hughson has arranged with the traffic authorities that only cars equipped with official stickers, proving their registration with the automobile committee, will be recognized by the police as entitled to visiting privileges.

Chairman Hughson also announces that on June 14 there will be an elaborate program of racing on the San Carlos Speedway, down the peninsula, as part of the entertainment. It will consist of 150 miles of professional racing, in which several well known drivers will compete, and a special event exclusively for cars owned in San Francisco. Whether the program will be a solid century-and-a-half race, or be split into 50 or 75 mile heats, or a 50 mile and final 100 mile race, will be announced by the speedway management about June 1.

In the ranks of the larger distributors an important change is to be found in the consolidation of two concerns of long standing, Lou H. Rose Co., and George Campe Co., into one organization, Campe-Rose Co., 1230 Van Ness Ave., incorporated for $100,000, and acting as agency for Maxwell and Chalmers cars in Northern California. Lou H. Rose thus continues with the lines which he has handled with increasing success for several years, while George Campe relinquishes his agency for Daniels cars, and his former sales building, 1117 Van Ness Ave., will become the used car department of Campe-Rose Co.

Another notable announcement is the change in management of Haynes Auto Sales Co., Haynes car distributor for Northern California. Clem W. Rogers, who in the past several years has held important executive positions with other large San Francisco agencies, has been made general manager, and Mead Cornell, sales manager. Philip S. Cole, long identified with Haynes distribution, will concentrate on his agency for the car in Oakland, Philip S. Cole, Inc.

J. E. French Co., announced some time ago as the new agency for Dodge Brothers cars in San Francisco, has launched into selling activity with temporary quarters in the northern half of the building of H. O. Harrison Co., 1214 Van Ness Ave. The company, incorporated by H. O. Harrison, J. E. French, and Charles Haggerty for $150,000, will be managed by J. E. ("Jack") French, former director of distribution for Dodge Brothers, Detroit, and previous to that Dodge Brothers district representative in San Francisco. C. A. Schumacher, of the former distributing agency, remains as sales manager, F. L. Pierce as service manager.

Lou H. Rose, of Campe-Rose Co., reports that 1100 Maxwell cars were sold in California since December, 1921, up to the second week of April, of which 700 were sold in the last 60 days. April sales this year were 282 per cent greater than those of April, 1921, compared with the average increase of 35 per cent on all other makes of cars combined, he states.

New individual passenger car models appearing recently in San Francisco are the 1922 Kissel 5 passenger touring; Chandler Royal Dispatch 4 passenger sport car, and 5 passenger sedan; Duesenberg open and closed types; Essex cabriolet; Mercer roadster and sport types; and Stanley brougham.

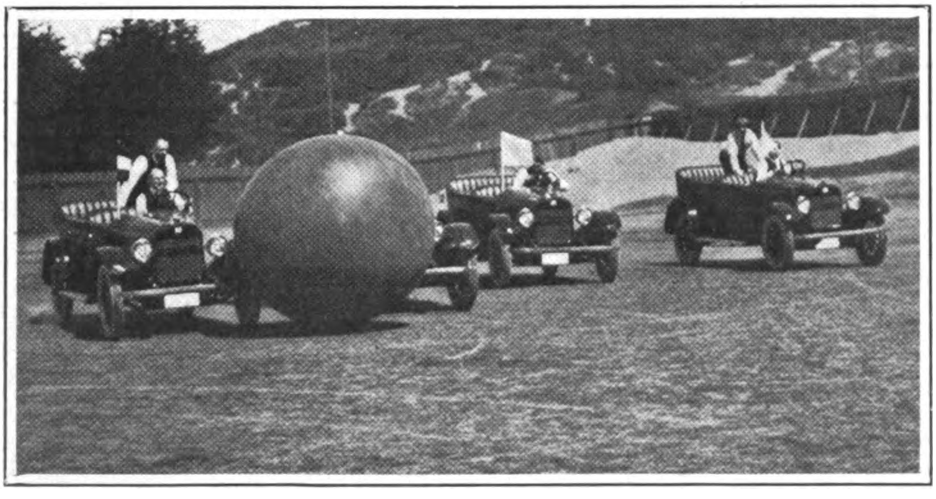
In the commercial vehicle field an event of note is the appointment of Max Rosenfeld as general manager of Service Truck Sales Co., 1626 Market St., direct factory branch of Service Truck Co., Wabash, Ind. His motor truck sales experience dates back to the days of the old Alco truck.

Franklin Motor Car Co., headed by G. A. Boyer, president, has appointed Harry Oliphant, whose automobile sales activity in San Francisco began in 1916, as sales manager.

James W. Greer has been named Pacific Coast manager for Cadillac Motor Car Co., Detroit, and will have headquarters in San Francisco.

C. D. Rand & Co., Mercer car distributors, have moved to new and larger quarters, with one of the handsomest sales rooms in the city, at 1910 Van Ness Ave.

The San Francisco Body Builders' Association has been formed, with a membership including the leading and largest body building and repair concerns, who will produce a specific line of California custom-built commercial car bodies. This will be sold under the trade name of "Custum-bilt," and an active campaign will be carried on to emphasize the service rendered in meeting the commercial car owner's exact needs.



PLAYING PUSHBALL WITH BUICKS IN SAN FRANCISCO.
One of the striking films shown during Open Road Week in the spacious show room of Howard Automobile Co. was a revelation of dexterity in steering, with no accidents. The way five or six Buicks hustled a huge pushball this way and that was startling. The picture was taken in San Francisco, where the Howard Co. developed the idea.

Road to Ensenada Open Again.

It appears that when the road to Ensenada, Lower California, was built, putting in culverts was overlooked, and last winter's rains did things to it; but an Automobile Club scout car made the 90 miles from Ti Juana, below San Diego, "in safety" recently.

L. A. SO FAR FREE OF SUMMER SLACK

Supply of Cars Behind Demand and Stocks of Used Cars Simmer—Show to Be Held Late in the Year.

Automobile distributors in Los Angeles generally expect to find a slight decline in sales during June, but in no previous year has there been so little indication of the usual summer-time quietness for passenger car sales as prevails now. May of last year represented the depth of depression; in the same month of 1920 all lines of business, the automotive included, were feeling the first vague, unpleasing premonition that the universal prosperity was lacking real foundation.

With all their activity the Eastern factories as a rule are producing with a sharp eye on the demand, trips of factory representatives to the Coast are not so necessary as a year ago, and distributors find their personal presence in the manufacturing centers a valuable factor when increased allotments to take care of orders on their books are sought for. However, with Los Angeles concerns the used car is not such a problem as it was. "Turnins" are being scrutinized quite critically, and dscounts allowed on them on purchase of new cars show a substantial shrinkage.

With the results of the Los Angeles-Camp Curry economy run still a basis of pleased discussion, the next event of interest to the trade is the annual meeting of the southern division of the California Automobile Trade Association at Pasadena. Following that will elapse several months containing no special events, but featured by uninterruptedly active business, it is hoped, until October or November, when Los Angeles dealers are to hold an automobile show of magnitude, even if it is protected from possible unfavorable weather only by tents.

This is the banner production year in the Hudson and Essex factories, but shipments to Southern California, Arizona and New Mexico, the territory controlled by Harold L. Arnold, Inc., are not keeping pace with orders, and Mr. Arnold has been a recent Detroit visitor, with the result of securing an increased allotment.

J. V. Baldwin, Chevrolet dealer in Los Angeles, went to Detroit at the request of General Motors officials for his personal report on the motor car market on the Coast, and reports that the long awaited new Chevrolet utility coupe will reach the Coast about June 1.

Among other trippers to the East were Earle C. Anthony and his sales manager and vice president, George Bury, who visited the Packard and Durant plants; L. V. Starr, Los Angeles branch manager of J. W. Leavitt & Co.; and J. B. Fahy, authorized Ford dealer.

Hill & McCready, with sales room at 2251 West Pico St., and service department at 1803 West Pico, are a new addition to the list of direct authorized Chevrolet dealers in the city. G. C. Hill was service manager for Eldridge-Buick Co., Seattle, several years, and A. W. McCready formerly was Studebaker dealer in Santa Barbara.

Aston Motor Car Co., Pilot car agency, has occupied temporary quarters at 1105 West Pico St. and will move into new permanent quarters in the fall.

Lynn C. Buxton, Haynes distributor, announces his organization has sold 43 sedan models of the 55 and 75 lines, valued at more than $75,000, all at retail and mostly in the city territory.

LOOKING UP!

Steel orders mean good business. In some sections steel plants are advertising for help, the first time in many months. Automobile makers are taking on men by thousands. So are railroads. Equipment companies are enlarging their forces. Rubber companies are extending operations. This is so in nearly all industries, even shipbuilding. The national credit men's body says April showed more signs of revival than any time since depression began two years ago. Dun's says recovery has progressed for a year but during recent weeks has been noticeable enough to compel general attention. Bradstreet's says collections make the best showing since last fall. Great mercantile houses like Marshall Field report increased booking of orders for fall delivery. Everything's looking up!

Earle C. Anthony, Inc., reports that during the first five days the new Packard single six models were on display at the Anthony branches throughout California, 97 cars were sold, and an allotment of 2000 is now being sought from the factory.

Walter M. Brown Co., dealer for the Durant and H. C. S. cars, announces that during April it sold 40 per cent of the total of new Durants registered in the city.

S. S. Nerney, vice president and general manager of William L. Hughson Co., has made the Los Angeles branch his resident office, returning to familiar scenes which he left in 1917 to take an executive post in San Francisco. E. L. Williams, former San Diego branch manager, becomes sales manager in Los Angeles, and R. T. Dawson of the Los Angeles branch takes full charge at San Diego.

New factory offerings recenty placed on display in the automobile district are the Lexington series 22; Moon 6-40, complete line for 1922; Studebaker Big Six 7 passenger summer-sedan; and Kissel 5 passenger touring car.

Huge Annual Economic Loss.

Automobile Club of Southern California says accidents cost Los Angeles $19,999,200 last year; motor car accidents alone, $6,671,800. Both life and property value are included, the former being computed at $4,999,800, based on U. S. Census Bureau estimates that lives of persons between 15 and 44 years old—the range in which accidents are most frequent—are worth $750 and $300 a year, of males and females, respectively.

Los Angeles' police statistician's figures are different. For the year from May 17, 1921, to May 17, 1922, he puts the loss, through 35,410 accidents, 7315 injuries and 210 deaths, at $4,691,764. Property damage for the year, he says, was $354,100; personal injury damages, $731,500; deaths at the Government valuation of $10,000 per life, $2,100,000; cost and loss in prosecutions, $305,000.

Los Angeles traffic deaths, January 1 to May 20, 1922, totaled 112, exceeding the same period last year by 9; injuries, 2438; last year, 2397; accidents, 13,830; last year, 11,767; by one newspaper's count.

To Readvertise for Truck Bids.

Bids on 107 motor trucks for the city of Los Angeles were to have been opened May 31, but new bids will be requested as the three-year-payment basis is found illegal.

The charter permits only year-to-year expenditures. The plan now is to lease from year to year for three years, payments to apply on purchase price. The total payment in three years is expected to be between $300,000 and $400,000.

Truck men working for the city on contract, many of whom are buying on time, are to be given fair time to find other contracts. They have been paid $14.42 a day. To the city's finance committee, one said his net average daily is only $7; and some said they would give their trucks to the city if hired personally at $7 a day. Others opposed the city's buying and said it would be sorry, in respect to upkeep costs, etc.

A Grade-Dodging Suggestion.

Wallis D. McPherson, of Mono Lake, Calif., says motorists intending to visit both Lake Tahoe and Yosemite, or Owens River Valley and Yosemite, will do well to go from Tahoe or the valley, westward on Tioga Road to Yosemite, instead of going to Yosemite first. The grades, he says, are much easier going west.

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The Motoring Authority of the Pacific Coast

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JUNE 1, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

A Region Rich in Opportunity

EVERY little while Motor West points out an instance of remarkable automotive manufacturing development in the Pacific region. It is hoped by this means to hasten action, by men in the region and especially men of abundant power who are too far from it to "see" it accurately, who would like to keep pace with the opportunity.

Probably relatively few in the East got the significance of an item in Motor West of May 15, stating that April production at the Chevrolet plant in Oakland, Calif., exceeded 5000 cars, as many as 275 being turned out per day. That is one case where opportunity was seen early and is being realized.

How the Business Has Come Back

HARD to realize today, especially at the factories, is the fact that but a short time ago automobile and truck manufacturers and those who supply them with materials of every sort, were struggling for their very existence, and that the question of the hour then was as to who would last until improvement came.

Thousands upon thousands of workmen were out of jobs and loafing in the automotive manufacturing centers. Some great factories were stilled and many had hardly a wheel moving. Yet today the plants are "going great guns" and workmen are scarce. Detroit has added thousands weekly to its payrolls, and has been advertising widecast for experienced men. The common laborer was still plentiful a few weeks ago, but now miners on strike are hurrying to the automotive centers, sure of a job, while skilled mechanics who drifted to other fields are returning to the more renumerative one of automobile manufacturing.

The material men cannot keep pace with demands and are crying for time, and automobile makers generally report orders on hand are sufficient to keep the wheels moving most of the summer.

Not so long ago the material men made it plain they would not manufacture ahead, that they would not stock up until orders were in sight. The situation developed so suddenly that their factories were loaded down with orders, and for immediate shipments, or specified deliveries, so far ahead as to even warrant stocking up if labor had not become scarce. Body builders in particular are reported to be suffering in this respect.

So it has come about once more that the automotive business has shown more remarkable recovery than any other business in the country, and the fact that the automobile and the motor truck are absolute necessities has been again brought home.

On a Highway Controversy

MOTOR WEST believes the article in this issue, entitled Victory-Lincoln War News, presents the various angles of an important transcontinental-travel situation more lucidly than has been done elsewhere or before.

There are three fights on—one between Salt Lake City and Lincoln Highway Association, with routes and Federal aid as bones of contention; one between Salt Lake City (pro-Victory Highway) and Tooele County, which is rather well populated and through which Lincoln Highway is routed; and one between Southern and Northern Nevada, as between adherents of Lincoln and Victory Highways.

Highway programs in Utah and Nevada are being tied up by the rows, in which, as C. C. Cottrell of California State Automobile Association puts it, most of the war material is trash. Harmful trash, disturbing the comfort, efficiency and prosperity of thousands of participants and innocent bystanders.

However, those indulging in this strife are receiving what they deserve, because they are not giving consideration to the present needs of the customer they all want to sell to—the transcontinental motoring public, which is finding out and cursing them accordingly.

The plain fact is that at this time neither the Lincoln Highway nor the Victory Highway route, across the lower end and middle, respectively, of the Great Salt Desert, is fit for the average motorist to travel on. Neither offers genuine service, compared with a longer but far more easily traveled route, south from Salt Lake City to Santaquin, near Provo, thence west to Ely, Nev. This avoids the desert altogether and actually saves time in reaching Ely. From Ely one route is west direct to Reno, and another, southwestward via Tonopah, is longer but a better way to Reno or any part of the Coast.

The fighters are not expected to like this; but if they were open-minded they would have stated the fact themselves; would not be in the present expensive controversy; and would be boosting for the one good route until able to offer something just as good.

To be sold, and remain sold, anything, including highway route propaganda, must offer, and deliver, service. No railroad management in its right senses would think of soliciting traffic before having a road fit to run over, if a fit road to the same terminus already runs through the same general territory.

The Traffic Fatality Situation

A NUMBER of cities are after traffic law violators hard. Los Angeles' new chief, in the past few days, had more than 3000 violators rounded up. Will the desired result be obtained? No.

Last year more than 40,000 printed pages of laws were adopted in this country. No doubt many relate to motor vehicle traffic. Yet they will not prevent, this year, figures like those of 1921, when more than 1,500,000 of our people were killed or injured in automobile accidents—more than six times the number of Americans killed and injured in the world war. Every wonderful Sunday will be followed by a Monday list of pitiable fatalities, and a ghastly array of funerals.

In France and Germany the idea that restricting speed produces safety was dropped long ago. England, famous for its speed traps, is also considering dropping speed laws. The idea is to treat each case on its actual merits, and to hope for few cases through sensible co-operation.

Common sense, plus adoption of the one-way plan much more comprehensively, plus automatic signals, plus moving street car tracks to near the curbs, plus stricter insurance rules, plus more common sense, will do more than all the laws on the books.

The Mountain Roads Are Opening

BACK East, the real old fashioned roads stopped heaving up after frost, some time ago, and dusty times have come, though unexpected rains continue to fall in many parts. In the Far West, climate is much more dependable, and in most of it motoring has been fine a long time, with relatively little moisture, yet without nearly as much dust as is characteristic of the country's middle section.

There is another condition that is peculiar to the Far West, and which is notable especially in Southern California. Following a spring of unusual floral richness, the hills already are turning brown; summer practically is here; yet deep beds of snow remain in the high hills and are visible from the lower levels, and every few days comes news that this or that much desired mountain highway has been cleared and is ready for travel. Soon motoring parties will be sleeping in the cool, not to say cold, altitudes, and waking up and looking down to where oranges and other fruits are ripening on the trees.

Good Luck to Lightning Bug Men

LUCIFERIN, invented by Prof. E. Newton Harvey, of Princeton University, is a cold, blue light, said to be everlasting. The idea is not new. The study of fireflies—"lightning bugs"—has been going on many years. Professor Harvey is unable to produce the substance in commercial volume, but someone will do it some time and motoring may benefit by it. Meantime, Nicola Tesla is putting in 22 hours a day, giving intense study to radio possibilities, applicable to lighting and every other form of power. Thousands of other eminent minds, and millions less eminent, now are concentrating similarly, and some day, maybe soon, we will have cold light.

Hoosier Classic a Coast Victory!

A probably fictitious negro lad, at the front early in the world war, when asked what he would do if he saw the German army coming, replied: "Ah'd spread de news all ovah France!"

He had nothing on the Los Angeles Times' radio man, who told the world and all way stations, the afternoon of May 30, that Jimmie Murphy of San Francisco, using a special car with a motor made by Miller of Los Angeles, had just won the 500 mile international race on the 2½ mile brick speedway at Indianapolis, breaking world record, leading all competitors from star to finish, winning $35,000 from the $50,000 purse, lap prizes and bonuses, and giving $135,000 spectators a fine run for their money.

Los Angeles' three afternoon papers all gave the news the top scarehead on the first page, and ran full reports of the race. No doubt other Coast cities gve it similar prominence.

Murphy made only three stops. His time, 5:17:30.78, averaged 94.48 miles per hour, breaking the record on the same track by De Palma, in a Mercedes, in 1915. De Palma's average was 89.84, his time hving been 5:33:55.50. According to the American Automobile Association's record list, Dario Resta, in a Peugeot, in Chicago, June 26, 1915, put the speedway record, regardless of class, non-stock, at 5:07:26.00, an average of 97.58. At Indianapolis, last year, Milton won in a Frontenac in 5:34:44.65, averaging 89.62.

In last Tuesday's race the first five finishers broke the record for 500 miles, and some intermediate records went as well.

Harry Hartz, Duesenberg, was second, about a lap (2½ miles) behind Murphy; Eddie Hearne, Ballot, third; Ralph De Palma, Duesenberg, fourth; Jules Ellingboe, in Ora Ora Halbe's Duesenberg (his own Duesie was out), fifth; Jerry Wanderlich, Duesenberg, sixth; I. P. ("Red") Fetterman, Duesenberg, seventh; Ira Vail, Disteel-Duesenberg, eighth; Tom Alley, Monroe, ninth; Peter De Paolo, in Joe Thomas' Duesenberg (his own Frontenac hit a wall in the 107th lap), tenth.

Of the 27 starters, 19 were still in the race at 425 miles. Milton, Leach special, was out before the halfway point, with four others. His gasoline line broke. Cliff Durant, Durant special, worked from a bad position to fifth at 50 miles but then broke an axle. More detail will appear in the next issue.

Calendar of Coming Events

June 3—Salem, Ore., State Fair Dirt Track Races, Sanctioned by A. A. A. J. E. Hickey, Manager.

June 14—San Carlos Speedway, Shriners' Entertainment program, 150 miles of Racing Events; auspices Automotive Entertainment Committee, William L. Hughson, Chairman, San Francisco.

June 15—Annual Convention, National Park to Park Highway Association, Sacramento.

June 19-23—Automotive Equipment Assn. Convention, Colorado Springs, Colo. June 24 also, if necessary.

June 20-24—Summer Meeting, Society of Automotive Engineers, White Sulphur Springs, W. Va.

June 26-27—Annual Meeting Southern Division of California Automobile Trade Assn., Pasadena, Calif.

July 4—Eleventh Annual Automobile Race, Tacoma Speedway.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in Connection with Brazilian Centenary.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-15—Automobile Show, Paris, France.

Victory-Lincoln War News

Various Angles of a Situation Which Has Set Fire to Sectionalism and Other Impulses

C. C. COTTRELL, formerly state highway engineer of Nevada, and who now is manager of the good roads bureau of California State Automobile Association, has issued the latest statement on the row which originated between Lincoln Highway Association and those in Utah, including the state road commission, who refuse further co-operation to complete Lincoln Highway, between Salt Lake City and Ely, Nev., across the lower end of Great Salt Desert as shown on the map below.

Mr. Cottrell's statement is a long, interesting addition to a huge quantity of matter which has been printed, especially in newspapers in Utah and Nevada, some favoring Lincoln Highway Association's chosen route from Salt Lake to Ely, which would serve them; others favoring another route across Great Salt Desert (also shown on accompanying map), from Salt Lake City to Wendover, and which was chosen for Victory Highway.

Mr. Cottrell says that much that has been printed is ill-informed "trash." He quotes the chairman of Nevada's state highway department board of directors as saying that continuing the quibbling will give the highway programs of Nevada and Utah a severe setback. Mr. Cottrell says even now the programs of certain sections are tied up completely. In effect he implores outsiders, especially, not to spout in ignorance of the facts.

Mr. Cottrell says the controversy dates back to when Northern Californians found they were not getting as much Eastern tourist traffic as they thought they were entitled to, and concluded it was due to bad roads in Western Utah and Northern Nevada. Both the Lincoln and Victory routes, Mr. Cottrell says, were bad. Both, he says, are in fairly good condition now, though "the relative merits of the two roads are not known at the present time." He says engineers of the U. S. Bureau of Public Roads, the state road commission of Utah and Nevada's highway department are investigating, and that "out of these investigations will come some concrete knowledge of what to do; and until then, at least, a halt should be made," referring to the controversy, which he says is so keen that "friends have been made into enemies, and even now one can go into certain communities and secure a fight at the drop of a hat."

Just how the investigations being made will result, as to being satisfactory to Lincoln Highway Association adherents, is not guessed at or indicated by Mr. Cottrell, except as implied by his suggestion that, as far as Nevada is concerned, contributions in addition to the $120,000 Lincoln Highway Association gave would hurry along the work on that route. "The Utah-Nevada-California Highway Association now is raising $150,000 with which to assist in building Victory Highway in Nevada. Any attempts of the advocates of the other road to discourage this effort should be viewed as discreditable to those people. The state of Nevada is not asking this assistance—the people there will build both roads, but contributions such as the above will tend to speed up the work."

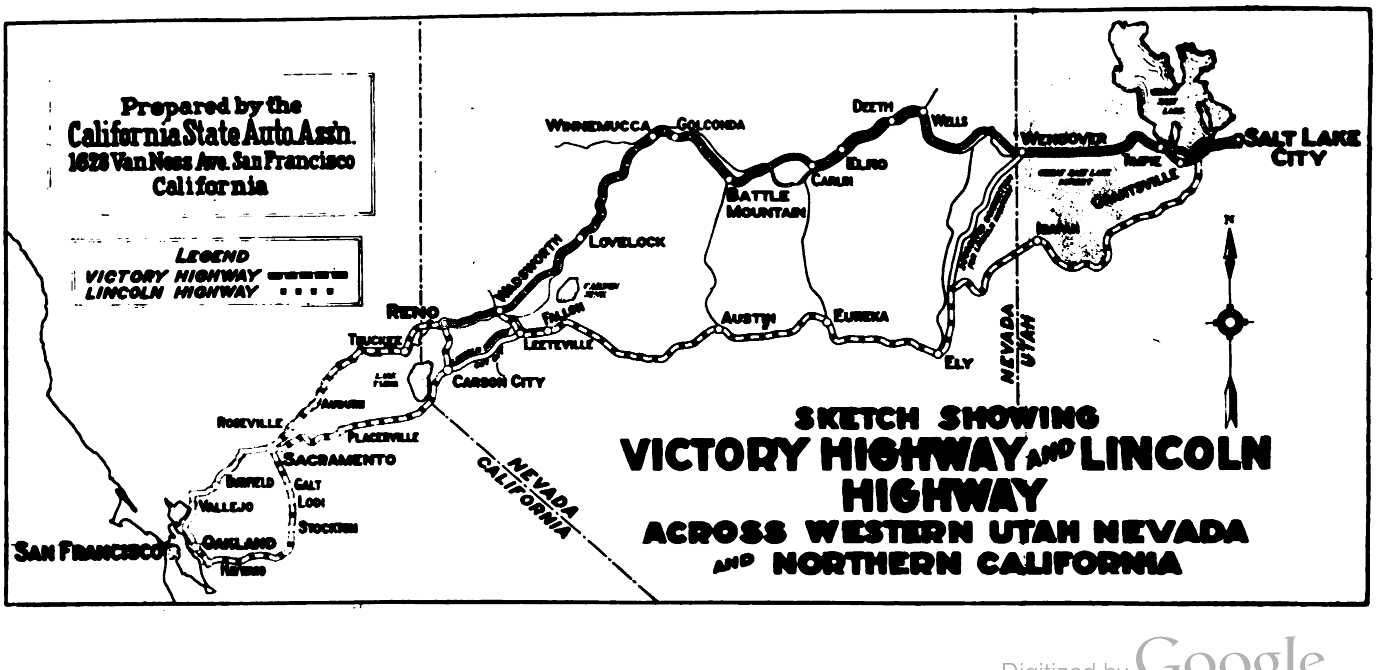
Speaking of the Victory Highway movement in Nevada, Mr. Cottrell says: "In an over-zealous attempt to urge the improvement of travel conditions into Northern California, the mistake was made of trying to choose one road for improvement and upon which the support of outside agencies might be concentrated. So far as Nevada is concerned this was particularly unfortunate. In that state the Lincoln and Victory Highways serve two entirely different communities and both will eventually be built. The funds for each road are raised in their respective territories, and there is no other thought in the minds of the state highway officials than to speed up the work on both roads as rapidly as possible. Both roads will be built together; the manner of raising finances there requires it; and the demand of two separate communities is always present. Then why all this controversy?"

One reply to that query, of course, would be Mr. Cottrell's own words:

"When the Federal Aid act went into effect last November it became necessary for Nevada and the other states to designate certain roads as primary and others as secondary. The (Nevada) state highway department named Victory Highway as a primary road and the Lincoln as secondary."

That decision "raised Ned" in Southern Nevada, which claims Lincoln Highway through the state is far better naturally, far more fit to be designated a primary road, than Victory Highway, the Northern Nevada route. Mr. Cottrell himself, when he was state highway engineer, declared some portions of the route from Ely Southwest toward Westgard Pass, into California, to be the finest natural road in the world; and A. L. Westgard, former, American Automobile Association pathfinder, declared for that route against strong pressure to choose one straight west from Ely toward the California line at Reno.

The same decision that "riled" Southern Nevada also hit Tooele County, Utah, because it was in conjunction with the Sale Lake City movement to neglect the route Lincoln Highway Association had chosen through Tooele


Prepared by the
California State Auto Assn.
1628 Van Ness Ave. San Francisco
California
LEGEND
VICTORY HIGHWAY ▬▬▬
LINCOLN HIGHWAY ▪ ▪ ▪ ▪
Winnemucca
Golconda
Deeth
Wells
Wendover
Salt Lake City
Elko
Carlin
Battle Mountain
Lovelock
Wadsworth
Fallon
Reno
Truckee
Leeteville
Carson City
Austin
Eureka
Ely
Ibapah
Grantsville
Tooele
Great Salt Lake Desert
Great Salt Lake
Auburn
Roseville
Placerville
Sacramento
Fairfield
Galt
Vallejo
Lodi
Stockton
Oakland
San Francisco
Nevada
California
Nevada
Utah
N
SKETCH SHOWING
VICTORY HIGHWAY AND LINCOLN HIGHWAY
ACROSS WESTERN UTAH NEVADA AND NORTHERN CALIFORNIA

County and the lower end of Great Salt Desert toward Southern Nevada.

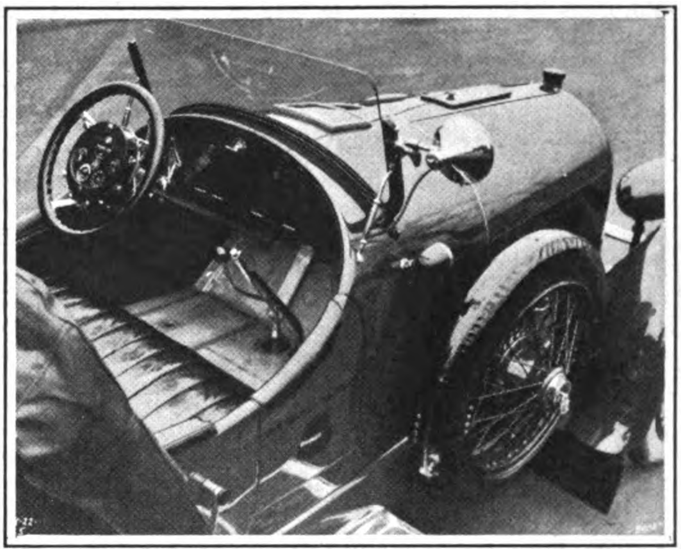
Both Tooele County and Lincoln Highway Association desire that Federal aid funds be withheld from the Victory Highway from Salt Lake to Wendover, at the Nevada line. That is another and a very imposing phase of the row.

Mr. Cottrell's statement indicates the row began as the result of the somewhat recent Nevada decision for the northern route as a primary road. Really it began between Salt Lake City business men and Lincoln Highway Association nearly eight years ago; soon after 1912, when automobile men met in Indianapolis and the idea of Lincoln Highway, across the continent, was given definite form. A beautiful 20 page book issued by the association, telling of progress including the year 1921, speaks in glowing terms of co-operation received all along the route "with the one exception of the section in Western Utah. There, where the route of the Lincoln Highway, and any cross-country road, must traverse the Great Salt Lake Desert, difficulties are encountered which require the fullest co-operation of every agency interested in the development of Western highway connections, if they are to be finally and properly taken care of. Unfortunately, this co-operation has not been continuously given by the state of Utah."

The Lincoln Highway statement tells of the 1918 donations of $100,000, by F. A. Seiberling, and $25,000 by Carl Fisher, for highway work in Great Salt Desert. This money, it is charged, was spent, and then, through pressure exerted from Salt Lake City in behalf of the route across the desert to Wendover, now Victory Highway, Utah's state highway commission refused to go on with the Lincoln route. A statement issued by Salt Lake business men admits that not only was the $100,000 furnished by Mr. Seiberling used on what is called the Seiberling section, "but an additional $100,000 of state funds were sunk in a mud hole which has never been fit for auto travel." Mr. Fisher's $25,000, together with $18,000 of state funds, was spent in building a road over Johnson's Pass, which was only partially completed.

Instead of violating faith in not continuing work on the route Lincoln Highway Association insists upon, and which means a 259 mile route from Salt Lake City to Ely, Nev., instead of 132 miles from Salt Lake City across the desert to Wendover, the Salt Lake City business men say that when construction difficulties became obvious, and they presented the merits of the shorter route to Wendover to Henry B. Joy, then president of Lincoln Highway Association, "Mr. Joy declared he would accept the route as far as Wendover, at least, as the Lincoln Highway, if this route be designated as a state highway from Salt Lake to Ibapah (toward Ely) via Wendover. This was done. Mr. Joy has since repudiated this agreement."

Based on Mr. Joy's alleged acceptance of the Wendover route, the Rotary Club of Salt Lake City raised $12,500 to match a like sum furnished by the state highway department, to build the Wendover cutoff. It is claimed a grade across the mud flats proved practical, and that then Gael S. Hoag, now Lincoln Highway Association's field secretary, instigated Ely, Nev., into revolt, resulting in the repeated boycotting of Salt Lake merchants; and that Lincoln Highway officials went to the town of Tooele, Utah, and stirred strife against the Utah road commission.



WHYTE MOTORCONTROLLED KISSEL NOW ON WAY WEST.
About May 30 there is due in Los Angeles Clifford Ireland, a genial Congressman from the Peoria district in Illinois; his companion being one Dick Sharon, a Peoria coal baron. They are on their way to a good time at the Shriners' conclave in San Francisco. They are wending their way in a Kissel speedster. Note the Whyte Motorcontrol on the steering wheel.

The Wendover road work was fairly under way before Lincoln Highway Association obtained the Seiberling and Fisher funds. The Salt Lake statement says several meetings were held there, and that the governor of the state and others "pleaded with the officials of the Lincoln Highway not to waste their funds in Western Utah, but to cooperate with the state in building the road where it should be built, and give the tourists the benefit of a safe and first class highway across the desert section of the state. At this time the state also put forth the proposition of giving this money to Nevada to be used on the Lincoln Highway in that state and, by adopting the Wendover route, as Mr. Joy had promised to do, a road across the two states could be rapidly pushed to completion."

As the Lincoln Highway officials would not budge, according to the Salt Lake statement, Utah's road commission added $100,000 to the Seiberling fund and $18,000 to the Fisher fund, with results already stated; and when Utah refused to spend more, came the accusation of bad faith.

As to that, for further enlightenment the Salt Lake statement suggests inquiry of Simon Bamberger, former governor of Utah; of the secretary of state, attorney general, state auditor and state engineer, "address Salt Lake City."

"This controversy," says the statement, "has been waged through three administrations, two Republican and one Democratic. It has now entered the fourth. In every administration the state officials have decided against the Lincoln Highway officials."

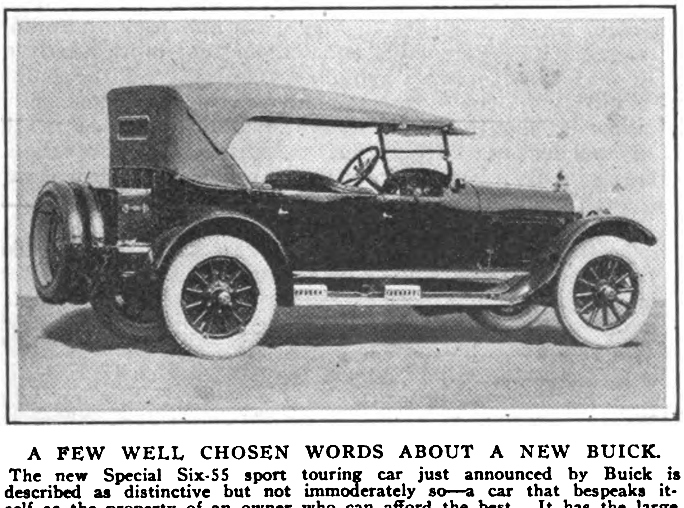
It appears the showing to Henry B. Joy, who is alleged to have agreed to the Wendover route when he was Lincoln Highway Association president, indicated that route was shorter than the other between Salt Lake and Reno; would cost less to build and maintain; would serve larger local population; has fewer miles of actual desert (meaning area devoid of trees, with water holes few and far between, barren stretches of sagebrush and rocky mountain ranges); its scenic value equal or better; more nearly an all-year road, because avoiding practically all the mountain passes; the route selected for two transcontinental railroads, the transcontinental telephone and, later, the air mail service; lastly, safer for tourists, who never would be more than 5 miles from water or help at a town, railroad station or section house.

In the April 1 issue of Motor West appeared an editorial headed "The Choice Westgard Made," referring to his selection, as American Automobile Association pathfinder, of the route from Ely to California, southwest via Tonopah and what now is called Westgard Pass, for Midland Trail, and which later was adopted also by the Lincoln Highway Association for its southern branch from Ely into California. Mr. Westgard refused to select, instead, the route west from Ely to Reno. His reason was, service to tourists regardless of local desires. Motor West, on April 1, urged continuation of that spirit of service. It spoke of the project for Victory Highway across Northern Nevada as "very excellent, indeed. When the route is fit to travel over it will have a special advantage for motorists in being near the railway practically all the way from Salt Lake to Reno. Meantime, efforts to divert transcontinental travel to that route will hurt it, not help it. Touring motorists are quite capable of feelings of resentment. Finish the job. Don't try to sell it as something which it is not." The editorial mentioned Frank W. Guilbert, secretary of Inland Automobile Association, Spokane, as repeatedly having denounced dishonest sectionalism, whereby motorists from faraway parts have been misled by incorrect information as to highway conditions.

The editorial was not pro-Lincoln Highway. In fact it spoke of a movement said to be under way to inform tourists about a route from Salt Lake south to Santaquin, Utah, near Provo; thence west on a road named Grand Central Highway, to Baker, Nev., and to the wonderful Lehman Caves, four miles from Baker; thence to Ely and on toward California. It is a fact that this route from Salt Lake to Ely, while 100 miles longer than via Lincoln Highway, is covered in much less time. Report is it is to be the new route of Roosevelt-Midland Trail.

As stated, the purpose that editorial was intended to convey was service to tourists. W. D. Rishel, manager of Utah State Automobile Association, Salt Lake City, appears to believe it was Lincoln Highway propaganda! He sent in the following letter:

> Motor West, Los Angeles: In the April 1 issue appeared an editorial on the selection of the auto routes between Salt Lake City and both Northern and Southern California. The editorial is well written and is handled in such a manner that it is most convincing to the average reader and the fair minded person who is unselfishly interested in developing the best possible routes between the points mentioned.
>
> There is one serious objection to it, however, and that is—it was written by a person who knows absolutely nothing of conditions, and a person who has been seriously misled on the real facts in the case.
>
> It mentions Mr. Westgard with the great credit that is due him, but it fails to state that it was Mr. Westgard who was the first Eastern trail blazer to officially map and log what is known as the Wendover Route, now the Victory Highway, and fails to state that Mr. Westgard then and there, in public and private, declared it the best and most feasible road from Salt Lake to San Francisco. This is common knowledge in Salt Lake, but this fact was evidently overlooked by the persons who "sold" the Lincoln Highway to the editor. The fact that Mr. Westgard did not agree with the Lincoln Highway officials in the laying out of their route through Utah to the west is too well known by all who have discussed the matter with Mr. Westgard. In fact his recommendations were ignored by the Lincoln Highway Association. The writer ought to know, because he accompanied Mr. Westgard on the trip in question.
>
> Mr. Westgard never, in his career, traveled over the Zion Park Highway or Arrowhead Trail. If he had he would have very probably told the truth about it and said it was the only possible all-year route between Utah and California. He would also have said it tapped one of the most scenic centers in the world. Also that the wonderful caves of American Fork Canyon were far more accessible from this route than the Lehman Caves of Nevada were from the Lincoln Highway, and that when finally completed it would be a shorter route between Salt Lake and Los Angeles and that it served a farming section of Utah and Nevada which must be given an interstate highway regardless of tourist travel.
>
> These are some of the facts which caused the state highway departments of both Utah and Nevada to give this road a primary rating, while in both states sections of the Lincoln Highway's Los Angeles connection were not even recognized with a secondary consideration.
>
> Now just a few more facts. Statistics show over 23,000 tourists passed over the Zion Park Highway in 1920 and over 20,000 in 1921, while only 1600 passed over the Midland Trail (Lincoln Highway's Los Angeles connection) in 1920 and 1200 in 1921. This of course is Salt Lake-Southern California travel residing outside of the state of Utah.
>
> The thought expressed in the quotation from Mr. Frank Guilbert is absolutely correct, but Mr. Guilbert has not been over the roads in question and Mr. Guilbert has not expressed himself in favor of the Lincoln Highway Association choice after such an investigation.
>
> The highway commissions of Utah and Nevada are going to build the roads in Utah and Nevada, and the locations were made on the advice of engineers hired by the states with a view of building the best trans-state route possible. California, Nevada and Utah have suffered for four years from lack of touring travel because of the obstructions placed in the way of completing the trans-Utah-Nevada routes by the Lincoln Highway Association, and editorials such as the one appearing in Motor West only help the Lincoln Highway Association to continue its rule-or-ruin propaganda, published for so many years through this section.—W. D. Rishel.



A FEW WELL CHOSEN WORDS ABOUT A NEW BUICK.

The new Special Six-55 sport touring car just announced by Buick is described as distinctive but not immoderately so—a car that bespeaks itself as the property of an owner who can afford the best. It has the large Buick chassis, meaning room for five persons, though nominally a 4 passenger car; long wheelbase; new rear spring suspension; abundant power; and equipment denoting enough and to spare of every good quality one could want to make touring a real enjoyment and relaxation.

Chevrolet to Make New GMC Car

The new copper-cooled car, which has been developed for General Motors Corp. by C. F. Kettering in the research laboratories at Dayton, O., and which has been subjected to a long series of the most severe tests, will be turned over in a short time to Chevrolet Motor Co. for practical experiments along manufacturing lines. Manufacture of experimental models will be under the direction of W. S. Knudsen. It is expected production of the new line in small quantities will begin in September. It is expected that the line will sell for about $150 more than the Chevrolet "490," and will have no effect on the "490" line, which will continue as heretofore.

Wood Wheel Makers Reorganize

The Automotive Wood Wheel Manufacturers' Association has been reorganized. It dissolved as an independent association when it became affiliated as a group with the Motor and Accessory Manufacturers' Association. When that organization abandoned group activities the wheel manufacturers decided to become associated as they were before entering the M. A. M. A. The work which was carried on prior to that time will be resumed.

Lincoln Highway Funds for Nevada

New York news is that contracts involving $1,500,000 for Lincoln Highway improvement in Nevada, and of which Lincoln Highway Association contributes $100,000, have been signed. It is pointed out that the route is the shortest from Salt Lake to Reno, near the California line; and that Nevada is as wide as from New York to Cleveland via Pittsburgh, and as long as from Wisconsin to Mississippi.

Prices on Westcott Cars Reduced

May 15, Westcott Motor Car Co., Springfield, O., made a net price list affecting all models, reductions ranging from $200 to $600, as follows: A-44 standard touring, reduced from $1890 to $1690; A-44 special touring, $2190 to $1890; C-38 sedan, $2890 to $2490; C-48 touring, $2290 to $1890; C-48 sedan, $3490 to 2890; C-48 limousine-sedan, $3690 to $3090.

CHEVROLET

WINS

In Its Class

Los Angeles-to-Yosemite Economy Run

Chevrolet economy, power and endurance again have been conclusively demonstrated by its great record in the annual Los Angeles to Camp Curry, Yosemite National Park, economy run, averaging

41.85 Ton Miles

PER GALLON OF GASOLINE

In the 360 miles, including 60 miles of mountain grades, deep in mud and slippery, the Chevrolet, carrying 5 passengers and baggage, used only 12 gallons of gasoline and one pint of oil, making the wonderful average of

30 Miles Per Gallon

The World's Most Completely Equipped
Low Priced Car Is The Economy Car

Chevrolet Motor Company

of California

Foothill Boulevard at Sixty-ninth Avenue

OAKLAND CALIFORNIA

New Davis Phaeton a Beauty

Powerful Machine Has Best Units and Is a Genuine-Leather-Class Car at a Very Low Price

FASHIONED after the larger Series 61 Davis models the new 5 passenger model 71 Davis Phaeton, made by George W. Davis Motor Car Co., Richmond, Ind., is a lighter, smaller six, yet built strictly in conformity with every standard of quality that has distinguished the preceding Davis models.

The Davis Phaeton sells for $1195, yet in it are incorporated the same specialized units used so successfully in the larger models—Continental, Timken, Delco, Borg & Beck, etc. It weighs but 2645 pounds and, powered with the new Continental 6Y motor, has shown some remarkable results in tests. Recently it took a notoriously difficult hill, near Richmond, Ind., on high, with a speed of 31 miles at the bottom and 22 miles at the top. It is said that only one other car has taken this particular hill on high. Under a stopwatch the Davis Phaeton shows an acceleration from 5 to 30 miles in 11 3/5 seconds, and from 10 to 30 miles in 9 3/5 seconds.

The new Continental 6Y motor is small in displacement, 3⅛x4¼ stroke, but develops 50 horsepower at 2600 r.p.m. This motor has four-bearing crankshaft; full pressure lubrication through hollow crankshaft; detachable cylinder head; silent chain-driven camshaft and generator, with a unique and readily accessible adjusting feature. Cooling is obtained by centrifugal pump and cellular type radiator.

Timken axles are used, both front and rear, with Timken bearings. The transmission is Warner, selective sliding gear type, with Timken tapered roller bearings throughout; three speeds forward and one reverse.

Peters' latest improved universal joints and propeller shaft are used. The carburetor is a Stromberg and the gasoline feed is supplied by the Stewart vacuum system from a 15 gallon gasoline tank, mounted on the rear of the frame. Steering gear is worm-and-sector, with latest throttle and spark controls.

The frame is sturdy, built of 6 inch channel section, special semi-heat-treated steel, thoroughly braced and gusseted with exceptionally staunch, rigid cross members. The rear cross member is 10 inches wide.

The rear springs are 52 inches long by 2 inches wide, flat underload type. The front springs are 35 inches long by 2 inches wide. Wheelbase is 114 inches.

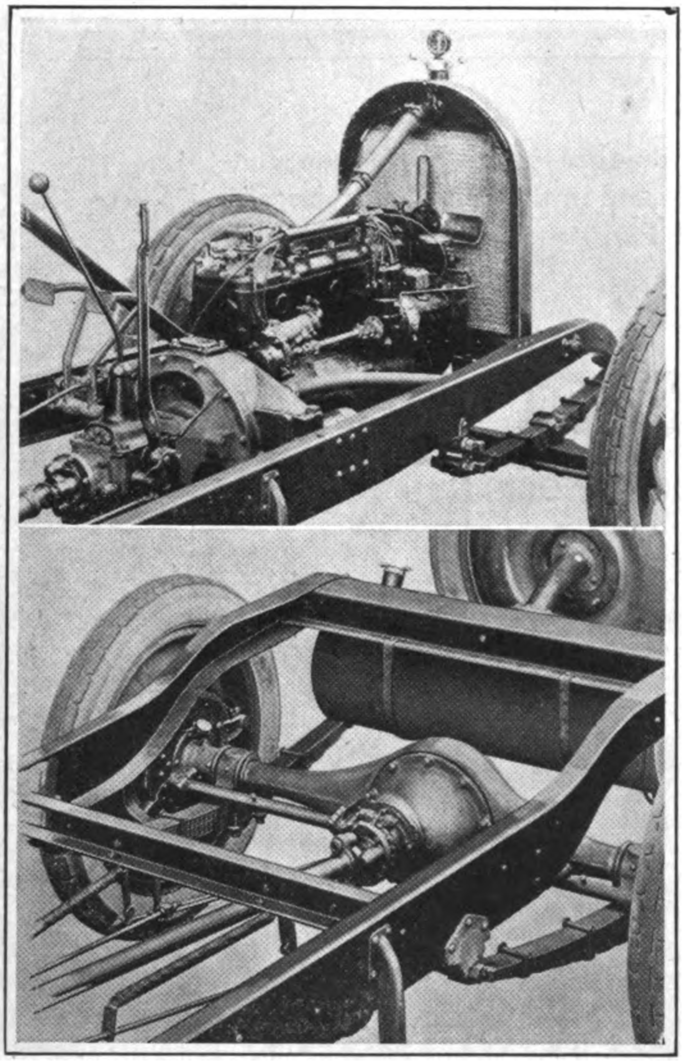
The Phaeton has the straight-line drive that has been characteristic of Davis cars many years. When the car is loaded, the drive from motor to rear axle is in an absolutely straight line, minimizing all the driveshaft friction and assuring full motor power at the rear wheels.

Five Disteel disc steel wheels are standard equipment. Likewise four 31x4 cord tires.

The upholstery is of the same grade of long grain genuine leather that is used in the larger Davis models. It is French-pleated over curled hair pads and oil-tempered springs. The top is double texture Ever-dry fabric, hand tailered to each body. A large rectangular plate glass window is provided for rear vision. The full complement of curtains, likewise, are hand tailored to each individual body. They are designed to give extra light to the interior, and splendid vision to the driver. They open with the doors, of course. The windshield is one-piece, rainproof, clear-vision and ventilating.

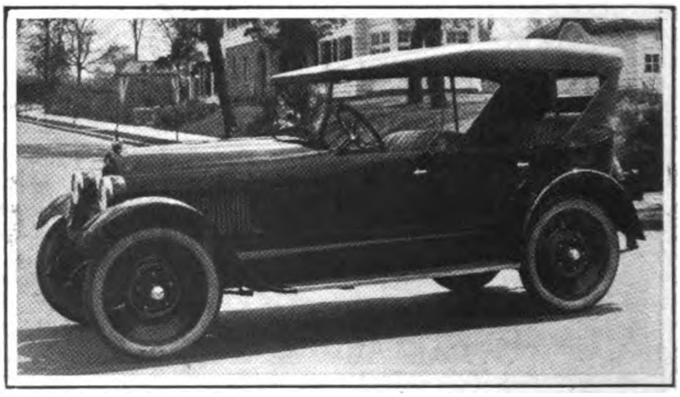
The body and coach work is of exceptional beauty, strength and rigidity. The finish is brilliant, deep and lasting, dark blue being used for the body, hood and wheels, while the fenders and chassis are in black enamel. Drum-shaped headlights, finished in nickel and black enamel, add a distinctive touch.

In workmanship, design and mterial every Davis standard is maintained, nd the result is a light, beautiful, powerful "six" at an exceptionally low price.

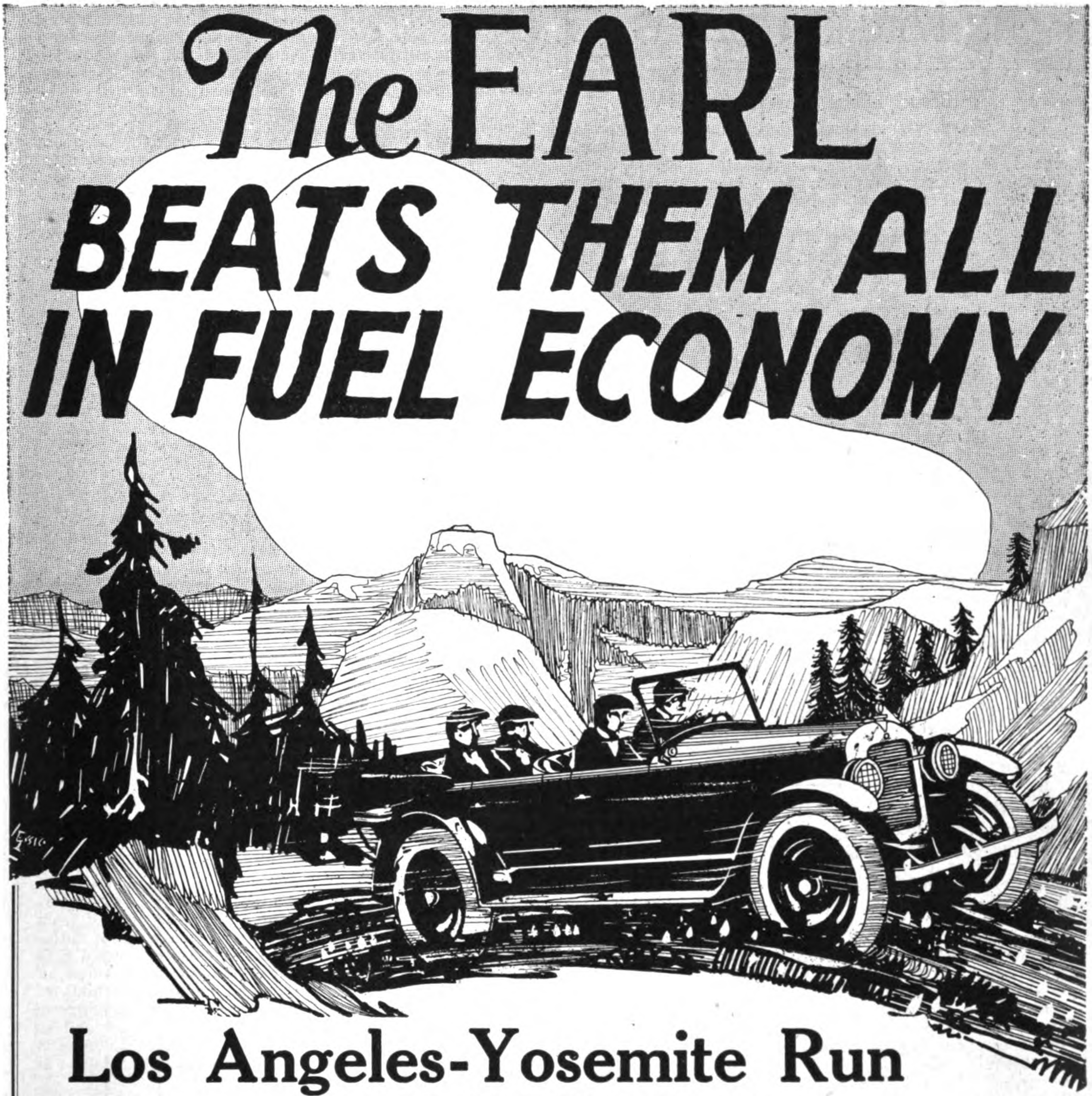


MOTOR AND UNDERSTRUCTURE OF NEW DAVIS PHAETON.
A strong point made for the motor of the Davis Phaeton, the new model 71, is accessibility. The same point is made as to transmission, clutch and every other part. The sturdy understructure also is shown here. The frame is 6 inches deep and made of semi-heat-treated steel. Note the rear axle assembly. The rear cross member of the frame practically covers the large-capacity gasoline tank and gives unusual support to the frame side members. The size and strength of the axle, the rear springs and their strong hangers, and the staunch but simply constructed rear universal joint, also are shown clearly.

Akron plants are returning to an 8 hour day. June 1, Goodrich begins three 8 hour shifts, from a 10 hour basis. Miller also was expected to be on the 8 hour day June 1.



THE NEW DAVIS MODEL, THE PHAETON, MODEL 71



Los Angeles-Yosemite Run

HERE IS THE PROOF!

Winner—	Class	Weight	Gas Used	Miles per Gal.	Ton Miles
Earl	**2-E**	**3420**	**12 gal.**	**30**	**51.30**
Oakland	4-E	3360	12¼ gal.	29.38	49.37
Dorris	5-E	5490	20⅜ gal.	17.66	48.50
Templar	3-E	3600	14 gal.	25.71	46.28
Chevrolet	1-E	2790	12 gal.	30	41.85

COME AND SEE THIS RECORD-BREAKER

Touring $1345—Brougham and Sedan $2095—Delivered here.

H. J. WURZBURGER

Distributor

Pico 3960 **ELEVENTH AND HOPE** **Los Angeles, Calif.**

IN FOREIGN FIELDS

Holland Likes American Cars

The thirteenth annual exhibition of motor vehicles at Amsterdam, under the auspices of "De Dijweil on Automobiel Industrie," was the largest and most important show of its kind ever held there, says Consul Mahin. It is estimated that 50,000 visitors attended, many of them from other countries.

There were about 150 cars exhibited, representing 42 different makes—the United States leading with 16, France following with 12, Germany with 11, Great Britain with 2 and Netherlands with only one. The medium and small type cars were the most popular as prices are almost double those in the United States at present. Dealers in the lower priced cars state that sales were far above expectations and it is estimated 75 per cent of the cars sold were of American make. The largest number of sales was made by the distributor of a low priced American car who gave an exhibition of step climbing, the most conspicuous event of the show.

While over 40 per cent of the motor cars in the Netherlands are of American make and the percentage is likely to increase as shown by the exposition, it is felt that still larger sales could be made if the price of American cars in the Netherlands could be reduced. This might partly be brought about if American manufacturers would change their policy of requiring agents to pay in full for cars before they are shipped from the United States—an item which adds considerably to the selling price of our goods abroad. Both this item and the heavy freight charges serve to raise the price of American cars far above the prices of competing European makes, which have a negligible freight charge and are sold on credit to the dealers.

Four of the 40 motorcycles exhibited were American makes—which are considered without equal, in the Amsterdam district at least. Only a few American accessories were shown.

Automobile Trade in Spain Picks Up

Several representatives of American automobile concerns in Spain report that sales will increase in 1922. One representative believes he can sell 150 cars during the year, and another already has orders for 40. According to Commercial Attache Cunningham, the past depression has been due to fluctuating exchange, lack of fore-knowledge as to the tariff and, finally, the failure of banks and lack of prosperity. The permanent tariff of Spain went into effect on February 17 and is somewhat lower than the temporary one, on the average.

It is only comparatively recent that motor cars have been used in the Vigo district, says Consul Wilson, and only about 1000 motor vehicles of all kinds are registered there. Consul Wolcott estimates that there are at present in use in the Bilbao district approximately 3000 passenger cars, 400 trucks and 500 motorcycles, of all which about 30 per cent are of American origin.

The second International Automobile Show of Spain will be held at the Park of Montjuich, in Barcelona, from May 24 to June 5, under the auspices of the Camara Sindical del Automovil and the Camara Sindical del Ciclismo. The first of the expositions, in 1919, was a great success, and all available space for the coming show has been taken. Representatives of American automobiles and accessories have arranged for a good share of the space, according to a report from Vice Consul O'Hara.

I'm Sorry for You, Bo!

There's a man somewhere in the world of men
Whom I may never see,
Yet the heart of my heart goes out to him
In deepest sympathy.
He may be a Turk or a Chinaman
Or a man of Timbuctoo.
It's the man who'll buy my flivver car
From the dealer I sold it to.—Exchange.

American Cars in Favor in Poland

American motor vehicles, especially the heavier types, are very popular in Poland, says Trade Commissioner Smith, Warsaw, in a report to the Department of Commerce; largely due to the fact of the surplus war stocks sent into the country. At present, however, sales of motor vehicles are hampered by the low value of the Polish mark and the high price of gasoline, which sells for from 35 to 40 cents (U. S. currency) per gallon; and the Poles consequently have turned their favor to the lighter cars with a lower gasoline consumption.

With the exception of motor equipment for agricultural purposes, motor vehicles of Poland are largely concentrated in the cities and industrial centers. It has been estimated from reliable sources that there are about 2500 passenger cars in the country, of which 200 are in the military service. Motor trucks number about 2700, with 1200 in the military and public service, and about 400 motorcycles, a large percentage of which are equipped with sidecars.

Western Greece Needs Our Products

The leading industry of Western Greece, the cultivation and packing of currants, is one which offers a great future to motor transport, according to a report from Consul Stiles, at Patras. However, the maket is not exceptionally favorable at present on account of extra taxes on gasoline, bad roads, low value of the drachma and the restrictions placed on imports by the consortium of banks. A few German and Italian cars entered the market when the exchange was advantageous, but American makes are in favor again and British and French cars are unable to compete. Considerable transportation expense and 50 per cent in the time of delivery can be saved by shipping direct to Patras from New York, instead of to Piraeus, as has been the custom. Three steamship lines are giving such service.

Spaniards Like Our Cars, But—

American auotmobiles probably will continue to enjoy preference in the Spanish market, says Commercial Attache Cunningham, Madrid, but the advantage of the Germans, French and Belgians, which might be secured from their depreciated currencies and the computation of duties in the value of the depreciated currency converted into Spanish pesetas, should be a cause of concern to American manufacturers and exporters. The business methods of these competitors should be another factor of concern. They are sending cars on the consignment basis, and as Spanish dealers cannot be sewed up in ironclad contracts with American houses at present these competitors are at a big advantage.

British Columbia Market for Accessories

Motor accessories of recent issues will find a ready market in British Columbia, according to consular reports, but whereas until recent years most of the automotive products purchased in Canada were from the United States, owing principally to the rate of exchange and the high tariff on this class of goods American firms gradually have been establishing factories within the Dominion. Imports along these lines consequently have diminished steadily until now they are less than 50 per cent of the supply. There are about 50,000 motor vehicles in British Columbia, which has a population of 700,000.

The two Brazilian ports, Rio de Janeiro and Santos, imported 53 American cars and 17 cars of other countries during the period March 19 to April 17, according to a cable from Commercial Attache L. Schurz.

Highway Matters

Straight Path More Dangerous

THE question of accidents on the state highways has been given careful attention by the Maryland State Roads Commission during the last year, says H. D. Williar, Jr., assistant chief engineer, in an article in a recent issue of Successful Methods. The Commission has adopted the policy that in addition to the ordinary maintenance, special attention will be given to the elimination of danger points on the roads and thus reduce accidents to a minimum.

With this feature in view, a system has been worked out whereby every accident occurring on the state road system is reported daily and represented by a colored tack on a large map in the office of the chief engineer. A study of this map intelligently shows the points or sections of roads which need immediate attention. It has established forcibly points where accidents are frequent, which otherwise would have been considered safe. It was demonstrated conclusively that "the most dangerous places frequently are the safest," and it was shown further that 70 per cent of our accidents occur on straightaways rather than on curves. The only answer to this conclusion is—speeding.

With this information at hand, Maryland has been able to improve its roads to the highest advantage, and the accident record is proving a source of invaluable information. To cite specific examples, it may be well to consider two stretches of road, one between Baltimore and Frederick and the other between Baltimore and Belair. Both of these roads are old waterbound macadam and carry approximately the same volume and kind of traffic, which is about 4000 vehicles per 24 hour day.

The Belair Road was widened several years ago from 14 to 20 feet because it had numerous curves and was considered dangerous. On this road, during the months of May, June, and August, 1921, there were four accidents, none of which were fatal.

The Frederick Pike, one of the straightest roads in the state, was 14 feet wide for its entire length, and prior to the keeping of the accident map was considered safe. On this road, during May, June, July and August, 1921, there were 36 accidents, 3 of which were fatal.

The answer to this comparison is evident. It demonstrated that on the straight road there was a strong tendency to speed and that widening was necessary and urgent. It showed conclusively that fast traffic had completely outgrown the width of the road. A contract was immediately entered into for its widening to 20 feet by constructing 3 foot concrete shoulders on each side of the old macadam. The record, since this work has been completed, shows a reduction in accidents of 75 per sent.

The photographs accompanying Mr. Williar's article show two roads. At first glance the straight Frederick Pike appears to be the safest sort of proposition and the curving Belair Road looks like a veritable trap. But that is just the reason why the straight road produces the accidents. It looks too easy.

Rural Landscapes Futuristic Nightmare?

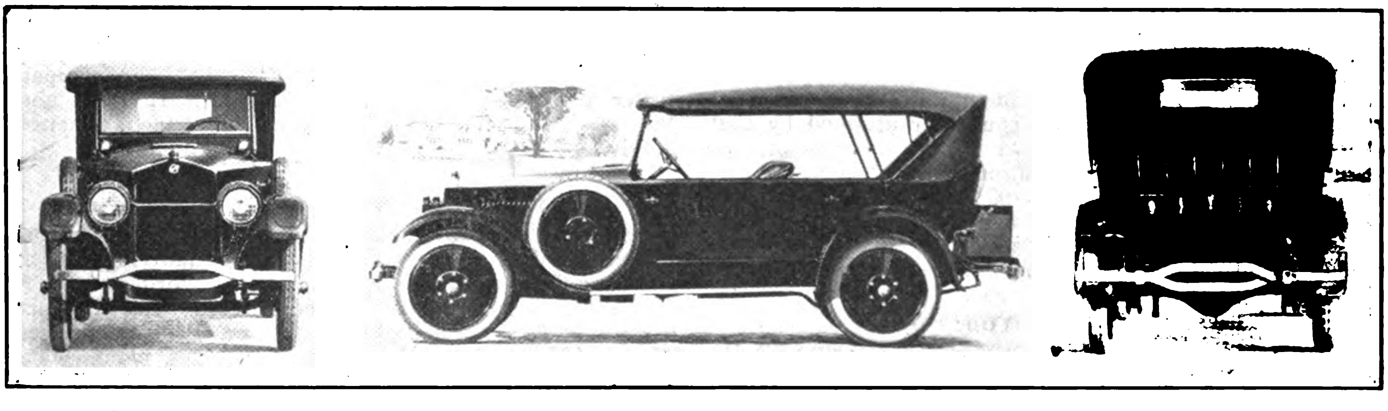
Speaking of advertising signs along highways, A. R. Hirst, state highway engineer of Wisconsin, says: "Heaven knows there are enough avenues of publicity open to those who wish to sell their goods without making our rural landscapes a futuristic nightmare." California Highway Commission adds: "The state and counties, by legislation, can keep advertising signs off the highway rights of way, but only public opinion, probably, can stop the desecration of the landscape. If an outraged public would boycott advertisers who persist in disfiguring nature with commercial appeals, the practice soon would cease. Protection of natural beauty should be inculcated at schools, so the next generation will be possessed of an esthetic sense that will refuse to countenance such practices."

Important California Contracts Let

Contract has been let for widening and thickening an important 4.57 miles of state highway between San Juan and Pajaro River, Calif. The new top slab of concrete will be 20 feet wide, with shoulders 8 inches deep. Indicating desirable new conditions in highway costs (though it is rumored they are due to go up) is the fact that the price is $47,802, compared with the state's estimate, $66,937. The state supplies material to the value of $70,825.

Another important contract, for grading 9 miles of the Tahoe-Ukiah road, between Upper Lake and Lake County line, will cost $167,359, the state supplying $6296 worth of material.

Canada has one car for every mile of improved road. Twenty years ago there were only 300 cars owned in the Dominion. Now there are 470,000, or a little more than half as many as in California.



NEW $1985 FOUR-PASSENGER STUDEBAKER BIG-SIX SPEEDSTER HAS INNOVATIONS OF UNUSUAL VALUE.

As the picture in the center shows, aristocratic appearance characterizes the new Studebaker 4 passenger Big-Six speedster. It looks like much more value than its price, $1985, would indicate; and examination of data shows the high value is there. Among its innovations is an upholstered driving arm in the middle of the rear seat. That this means much additional comfort there can be no doubt. Other features, either exclusive or obtainable only in the highest priced cars, include the courtesy light, the traveling trunk and trunk rack, front and rear bumpers, and disc wheels, including two extra wheels with nonskid tires and tubes, mounted on the running boards. Long semi-elliptic front and rear springs, 126 inch wheelbase and perfect chassis balance make for additional riding comfort. Ease of operation is assured by the perfected dry plate disc clutch and by the intermediate transmission, which is easy-shifting, positive and noiseless. The motor is 60 horsepower with detachable head, of Studebaker design and manufacture.

Good Profits
Without
"Comebacks!"
The One Piston Replacement Service That Gives Satisfaction to Both Dealer and Motorist——
JAHNS QUALITY PISTONS

All that the average motorist expects in a piston replacement job is dependable, efficient and economical service. He doesn't begrudge the dealer a fair and reasonable profit if he gets what he pays for. And especially is this true when the cost is less or no more than for ordinary pistons.

Every set of Jahns Quality Semi-Finished Grey Iron Replacement Pistons installed by a dealer proves an asset to his business. The job is done quickly at a good profit. The satisfaction is lasting. There is never any backfire on a Jahns job.

Jahns Quality Pistons require only the slightest adjustment. They are the result of years spent in making "Nothing But Pistons." No freaks. No innovations. No experimental compositions. Always in stock for every size and kind of internal combustion motor.

Let us put you in touch with the Jahns distributor nearest you.

W. H. JAHNS--"Nothing But Pistons"
2650 Lacy Street Los Angeles, Calif.

General Motors Productions Jump

Continued evidence that the nationwide demand for standard makes of motor cars is approaching record proportions is found in current production figures given out by General Motors. In April its automobile and truck divisions produced and sold approximately 40,000 units, and this total was fully expected to be exceeded in May. In the first four months of 1922, General Motors plants in the United States and Canada produced approximately 115,000 motor vehicles, which more than doubles their production for the corresponding period last year.

Heading the list in number of cars shipped is the Chevrolet, which is now pushing its production at a rate of 1000 cars per day. The tremendous increase in the sales of this division is one of the outstanding developments in the automobile trade.

As indicating the wide range of buying demand it is interesting to note that even with its great new plants operating at capacity, Cadillac is unable to supply demands. Cadillac production schedules for the remainder of 1922 indicate the largest output ever attained by that division in any one year.

Buick, for years among the foremost producers, is operating at a rate of production 65 per cent greater than last year and was heading for a new high mark in May. Oldsmobile reports a retail demand exceeding production and Oakland shipments for April were practically double the output for that month last year.

C. S. Mott, vice president of General Motors, interprets the large volume of sales as conclusive evidence of returning prosperity.

Effective June 1, Seiberling Rubber Co. makes a 12½ per cent price reduction on all Seiberling and Portage straightside cords.

The May issue of Indian Rubber Review said Akron's larger factories were producing 75,000 tires a day.

Creditors Buy Maibohm Motors

At court auction in Sandusky, O., May 15, Maibohm Motors Co., was bought by the creditors' committee representing claims totaling $500,000. The purchasers take all the real estate holdings and buildings, including the model plants finished late in 1920; the entire inventory; together with all cars completed or unfinished.

The new company will start immediately on a refined Maibohm. The Maibohm Co. hailed originally from Racine, Wis., building carriages. Shortly after the armistice the factories at Racine were burned. The company developed its light six at Sandusky, the total sales of this model already being over 7800. The company did not get into quantity production until late in 1920. When the buyers' strike stagnated the automotive industry in 1921, the company held its head above water, but continued quiet in the industry made it advisable to call for a friendly receivership, which was given last October.

The receivership now being terminated, the company looks forward to a very successful year. It has a good factory, good car, good management, and is financed amply.

Goodyear's 44,000,000th Tire

Goodyear Tire & Rubber Co. at Akron recently completed building its 44,000,000th tire—qualifying, is the claim, as the largest tire producer in the world.

The Goodyear Co. was started in 1898. Recently production at Akron was 26,000 tires a day, within 20 per cent of the 1920 peak, while the Los Angeles plant, which started production June 14, 1920, is now producing 3000 tires per day, with plans set for 3500 per day in June.

Pierce-Lafayette Deal Is Dropped

Negotiations between the directors of Pierce-Arrow and Lafayette, for a consolidation, have been dropped, owing to inability to agree upon terms, it was learned late in May.

Tractor Department

A Banker on Farmer's Situation

FOREMOST among the industries of the United States is agriculture. Farmers in this country are planting their 1922 crops in a well founded expectation of a profitable season. Their confidence, however, is not based on the belief that price increases which have taken place since the first of the year will necessarily be permanent. They realize that these gains may be only temporary and seasonal and that international market conditions may conceivably drive the prices of the crops which they are now planting to lower levels before harvest time.

They know that the essential is not the prices which they receive for their crops but the relation between the various classes of prices, and they recognize that the prices of goods they must buy are gradually being adjusted to the prices of agricultural products. Furthermore, says Stevenson E. Ward, vice president of National Bank of Commerce, New York, they know that they have at their command the essential factors of profitable production, namely, natural conditions for low-cost operation, a certain market and sufficient credit.

From the standpoint of soil, climate, and methods which insure a high productive efficiency per man, the farmer of the United States is placed more advantageously than is the agricultural producer of any other country. The domestic market is the greatest single market, with the highest consuming standards of the world, and whether or not business in Europe revives, our agricultural surplus will find a market there. Exports from the United States of grains and pork products and other main classes of agricultural products, except cotton, made new high records in 1921, if the abnormal shipments during and immediately following the war are excepted. Europe must buy food and raw materials and it will find the money this year as it did last year. Given the ability to produce and sell, the only other requisite is credit, and country banks are now able to meet the demands of customers entitled to it.

Evidences of renewed confidence on the part of the farmer are to be had on every hand. Retail trade in agricultural districts, excepting in hardware and similar classes of goods for use in farming operations, is still restricted, but wholesale trade in the farming districts shows improvement and sales of fertilizer and of agricultural implements have both been better than even the expected seasonal demand.

Improvement in agriculture is basic to the entire situation, but the farmer is dependent to a high degree on conditions beyond his control, and the physical volume of farming operations is not subject to rapid changes in accordance with supply and demand. Important as is the change of feeling among farmers, the betterment is as yet primarily one of sentiment. It is in other basic industries that there is to be found the actual physical evidence of expanding production.

Shipment of Tractors Reaches China

Consul General Heintzleman, Hankow, China, reports to the Department of Commerce that there has just arrived at Hankow a shipment of agricultural machinery and implements from the United States. The order was placed through a local American concern in connection with the development, by a group of Chinese capitalists of Hankow, of 13,000 acres of land in the northern part of Honan, south of and bordering on the Yellow River. The promoters of the enterprise intend first to undertake the cultivation of peanuts. The shipment consists of one wheel-type tractor, two disc harrows, and two two-furrow gang plows. This is a trial purchase and if the machinery and supplies prove satisfactory additional orders will be placed; moreover, other farming implements and harvesting machines of various kinds will be ordered as required.

So far as is known this is the first tractor to make its appearance in Central China, and it is hoped it may prove the harbinger of a new order of things in that part of the country. The farm for which these implements have been bought is under the supervision of agricultural students trained in the United States, who say their only fear for the success of the project is that their plans may be interfered with by irresponsible military commanders and lawless soldiery. There is also practically no police protection against banditry in the interior of Honan.

Facts Affecting Tractor Interests

The Bureau of the Census says that nearly every third farm in the United States had at least one automobile on the first day of last year. Of the 6,448,366 farms in the United States, 1,979,564, or 30.7 per cent, reported having automobiles to the number of 2,146,512. Although Iowa led all other states in the number of automobiles on farms, having 177,558, Nebraska, with 104,453, showed the highest percentage in relation to the number of farms, heading the list with 75.6 per cent.

Villa, of villainous record in Mexico, has many men on his ranch, dependent on him. One tractor, he is said to have said, does the work of 12 of them, every truck the work of six ox carts; so back to the cart, mule and one-horse plow for Villa's rancho.

L. W. Melcher, formerly factory manager of LaCrosse Tractor Co., and later with Oshkosh Tractor Co., and who has been connected with the tractor department of Allis-Chalmers Co., Milwaukee, several years, has joined Oneida Motor Truck Co., Green Bay, Wis., as general manager.

According to the latest census, and the number of reporting farms, there was nearly one automobile, truck or tractor for every farm in California, said to have had 117,670 farms in 1920. Of these, 62,453 reported 71,518 automobiles, 5909 reported 6416 trucks and 12,131 reported 13,852 tractors. In the United States only 13 states reported more motor vehicles per farm than California.

A paper in Anaheim, Calif., contained this ad: "Fordson tractor, fully equipped, extra pair trousers." Another paper asked: "What will Henry stock on 'em next?"

Russian farmers have only 14 per cent of the agricultural implements they had before the war. There, and elsewhere, there is ripening a future great crop of orders for the United States.

Preliminary mechanical facts about tractors and motor vehicles are being taught by means of motion pictures, instead of lectures, in many automotive schools.

The New Model "F"

Cletrac

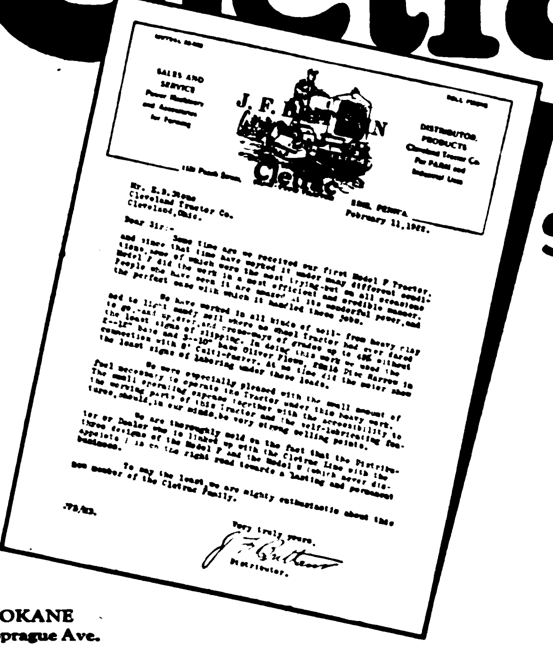
The Evidence In The Case

ANYTHING we, who make the Cletrac, might say about its strong selling qualities would mean far less to you if it were not backed up by such evidence as that given in the letter shown here.

We get many such bits of real "evidence" every day from men who have had long experience with tractors and who look at tractors from your own point of view. They all speak of the Cletrac F as an *outstanding tractor value*—one which meets the farmer's requirements, both in range of usefulness and price, better than any they have *ever* sold before.

Details regarding open territory sent upon request.

THE CLEVELAND TRACTOR CO.
Largest Producers of Crawler Tractors in the World
19127 Euclid Avenue Cleveland, Ohio
LOS ANGELES 1029 S. Grand Ave.
SAN FRANCISCO 147 New Montgomery St.
SPOKANE 30 E. Sprague Ave.



SALES AND SERVICE
J. F. [illegible]N
DISTRIBUTOR PRODUCTS Cleveland Tractor Co. For FARM and Industrial Uses
Cletrac

Mr. [illegible]
Cleveland Tractor Co.
Cleveland, Ohio.

February 11, 1922.

Dear Sir:-

Some time ago we received our first Model F Tractor, and since that time have worked it under many different conditions, some of which were the most trying-but on all occasions Model F did the work in a most efficient and credible manner. People who have seen it are amazed at its wonderful power, and the perfect ease with which it handled these jobs.

We have worked in all kinds of soil- from heavy clay and to light sandy soil where no wheel tractor had ever dared to go,-and up, over, and cross-ways of grades up to 40% without the least signs of slipping. In doing this work we used the 2--12" base and 3--10" base Oliver Plows, [illegible] Disc Harrow in connection with 8' Culti-Packer. At no time did the motor show the least signs of laboring under these loads.

We were especially pleased with the small amount of fuel necessary to operate the Tractor under this heavy work. The small operating expense together with the accessibility to the working parts of this Tractor and the self-lubricating features, should, in our minds, be very strong selling points.

We are thoroughly sold on the fact that the Distributor or Dealer who is linked up with the Cletrac Line with the three designs of the Model F and the Model W (which never disappoints) is on the right road towards a lasting and permanent business.

To say the least, we are mighty enthusiastic about this new member of the Cletrac Family.

Very truly yours,
J. F. [illegible]
Distributor.

Now $595
Complete
F. O. B. Factory

Moline Plow Co. Reorganization

Announcement of the completion of reorganization of Moline Plow Co., Moline, Ill., was made May 11. New plans for the company and its subsidiaries, chief of which will be Stephens Motor Car Co., were ratified. The new company was launched with $16,000,000 of current assets and with all current indebtedness cleared from its books except accrued and current expenses and $70,000 of current accounts.

The most striking feature of the reorganization is the conversion of $25,000,000 of indebtedness into $12,500,000 of 20 year debentures and $12,500,000 of first preferred stock; $7,500,000 of old first preferred stock was converted into $7,500,000 of new second preferred stock.

The financial housecleaning was done with unusual thoroughness. The assets are stated to be net after writing inventories and plants to rock bottom, making ample provision for liquidating all unprofitable departments and obsolete and slow-moving inventories, for possible losses on receivables, and for any reasonable contingency of further readjustments of the business or declines in value.

The officers elected are: Frank O. Wetmore, president of the First National Bank of Chicago, chairman of the board; George N. Peek, president; H. S. Johnson, executive vice president; R. W. Lea, vice president and manager of Stephens Motor Car Co.; F. W. Edling, vice president and sales manager; C. B. Rose, vice president in charge of tractor works; H. B. Dineen, vice president in charge of implement manufacturing; L. C. Shonts, secretary; L. C. Blanding, assistant secretary; F. N. Hoenigman and John Hammerich, assistant treasurers.

The following were elected directors: F. O. Wetmore, G. N. Peek, H. S. Johnson, John E. Blunt, Jr., Merchants Loan & Trust Co., Chicago; C. P. Coffin, Illinois Steel Co., Chicago; Herman Waldeck, Continental and Commercial National Bank, Chicago; S. A. Mitchell, Mercantile Trust Co., St. Louis; C. T. Jaffray, Frist National Bank, Minneapolis; Rumsey W. Scott, Chemical National Bank, New York City; J. Herndon Smith, St. Louis; F. F. Winans, National City Co., Chicago; Henry R. Johnson, Chatham & Phoenix National Bank, New York City; R. I. Barr, Chase National Bank, New York City; Horace Fortescue, Philadelphia National Bank, Philadelphia; H. H. Cleveland, Rock Island, Ill.

Standard Signal Colors Needed

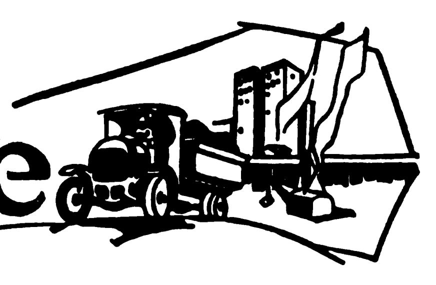
A conference was called for May 23, in New York, by the American Engineering Standards Committee, in accordance with requests received from the Illuminating Engineering Society and International Traffic Officers' Association, to determine the desirability of standardizing the colors used for traffic signals. These organizations have called attention to the fact that there are being placed on the market, and in use, semaphore control apparatus having numerous colored lights at variance with each other and at variance with colored lights used for other purposes along the highways, thus leading to confusion and to numerous accidents.

A. A. A. Seems in for Trouble

It appears the annual meeting of American Automobile Association, in St. Louis, May 22-23, broke up in a row. Earlier, from Chicago, May 17, came a report that representatives of 243 automobile clubs and more than 200,000 motorists met there that day to organize a national organization of motor car owners. A committee, including representation from California, was named to effect a permanent organization, select a name and temporary officers, pending the first convention.

Thirteen public tourist camps will be developed in Pennsylvania this year. Nine will be on main highways and equipped fully.

The Car of Commerce



California Motor Truck Matters

WHO'S who? California Draymen's Association members are asking. This body has been established three years or more. Its headquarters are in San Francisco and it has 17 local units, one of them being in Los Angeles. There is evidence that leaders in this body are disturbed by the member-getting efforts of California Motor Transport Association, formed in December last in Fresno.

It is claimed that the older body is a going concern of proved ability to represent motor truck owners in such matters as legislation; and that not only is the new body apparently proceeding on the assumption that this is not so, but that its management appears to favor legislation inimical to motor truck progress. Intimations even indicate that a strong underlying motive in the newcomer's activity is to provide a handsome income from membership fees and dues, for certain of its personnel. It is stated that a vigorous member-getting campaign is on, the means being professional solicitors, working on commission. The aggregate annual sum possible to obtain, if a notable proportion of the 33,000 or more truck owners in the state were made members, would be very large. It is hinted quite plainly that the very readable publicity being sent out by California Motor Transport Association fits into this member-getting plan very effectively.

"If truck owners want what the Transport body is said to favor, in legislation, they can do as well by not paying for membership in it," said one critic. "Its managers are said to favor a 24,000 maximum weight limit, and 650 pounds per inch of tire width. The present law permits a 30,000 pound limit, and 700 pounds per inch of tire width."

A 24,000 pound limit, it is pointed out, might do for Fresno County raisin loads, but anything less than a 26,000 pound limit and 700 pounds per inch of tire width, would be disastrous to motor truck commerce in the state as a whole.

California Draymen's Association, the older body, and members of which declare the new body is an unnecessary intruder, apparently has lacked adequate appreciation of what logically prepared publicity will accomplish. Motor West, of course, is pleased to give all comers fair representation. To that end there is printed below a copy of a circular letter sent recently to about 24,000 truck owners by Mack-International Motor Truck Corp., Los Angeles:

To the Truck Using Public:—We are in receipt of a letter written on stationery of the California Motor Transport Association and signed by Fred Mott, secretary-manager of that association, which says:

"At a meeting of the board of directors of the California Motor Transport Association held in Fresno, Monday, May 1, the following platform and program for legislation was adopted:

"1st. A uniform law throughout the state controlling the weight limits, taxes and regulations of motor trucks on all the highways within the confines of the state.

"2nd. A weight limit of truck and load of 24,000 lbs.; a six-wheel vehicle with three axles, 32,000 lbs.; one four-wheel trailer to be permitted with a total gross weight limit of truck, trailer and load not to exceed 42,000 lbs., distributed so as not to exceed 650 lbs. to the cross section inch of tire.

"3rd. The taxes or license to be increased not to exceed 100% of the amount paid at present. An additional tax on motor trucks operating as enfranchised common carriers of not to exceed 100% of the above mentioned tax. An increase of tax on passenger vehicles of not to exceed 10%.

"4th. The adoption of additional public safety measures.

"5th. A severe penalty which will make a jail sentence obligatory in the case of habitual offenders."

This company has received many inquiries from truck owners who have been solicited for membership in the California Motor Transport Association. The association itself, through Mr. Mott, has requested our indorsement. To all enquiries and to Mr. Mott, we stated we did not care to commit ourselves until we received a declaration of the association's intent and purpose. This declaration having been received, we now go on record as being opposed to the association, refusing it our endorsement and advising truck owners against becoming members. Our decision is founded upon the following reasons:

We believe 26,000 lbs. is the lowest maximum gross weight limit owners of heavy-duty truck equipment can accept and operate profitably, and that equipment when loaded to capacity exceeding that weight now licensed in this state should be permitted to continue to operate, carrying a capacity load. We believe six-wheel vehicles having three axles not less than 96 inches apart require a maximum weight of not less than 36,000 lbs. We believe 700 lbs. per inch of tire width, as now stipulated in the state law, should be allowed. We believe the above weights should be legal alike on state and county roads except when at such times, because of weather or other well-founded temporary conditions, these weights would prove excessive.

We believe the most equitable basis for tax fees is that founded on loaded vehicular weight, every passenger car and property carrying vehicle being taxed in direct proportion to its weight.

Passenger car weight should be that of the vehicle plus the sum of the adult seating capacity multiplied by 150 lbs. Property carrying vehicle weight should be that of the vehicle and body in pounds plus the manufacturer's rated load capacity.

The California Motor Transport Association advocates an increase in fees for trucks up to 100% additional to the present fees and an increase on passenger vehicles not to exceed 10% of the present fees. As we view it this places the California Motor Transport Association outside the category of those who are to be regarded as pledged to the best interests of motor truck owners. We see nothing equitable in their proposal to increase truck fees up to 100% and passenger car fees not to exceed 10%, thereby putting an excessive portion of the tax burden on the trucks.

It is our opinion, further, that by advocating a maximum weight limit of only 24,000 lbs. the California Motor Transport Association is seeking destructive legislation. At the 1921 session of the California legislature the state highway commission sanctioned a maximum weight limit of 26,000 lbs. and if the California Motor Transport Association has the truck owners' true welfare at heart, why should it seek to weaken these interests by advocating a maximum as low as 24,000 lbs.?

The California Motor Transport Association is now conducting a canvass for members from among motor truck owners. The association expects to derive its financial support from dues paid by members and on the basis of its declaration we feel it has nothing to offer that warrants membership.

In addition to headquarters in Fresno, California Motor Transport Association has offices in San Francisco and Los Angeles. Its stated general motives have been told in Motor West, which also repeatedly has printed articles sent out by it and accredited to one or another of its officers. So far these articles have stated general purposes, and have seemed excellent, giving the impression that the management's idea is to fill a want long felt by motor truck owners; that the plan is to be to them what the state's two large automobile clubs are to passenger car owners.

On May 29, at The Pines, 55 miles northeast of Fresno, there will be an executive session of California Draymen's Association. Affiliated bodies will be represented also, it is understood. The purpose of the gathering is said to be to discuss legislative and other matters which are important to motor truck interests, the investment of which aggregates many millions of dollars. No doubt one subject will be a case now in court, and decision on which is expected daily. It is expected to make clearer in what way counties may legislate, differently from the state's motor vehicle code, in respect to maximum weights. The state law permits counties to fix limits lower than the state limit. The question is, may they do this by prescribing the number of wheels on which weight may be carried? The state permits two trailers, but county ordinances have made one trailer the limit.

Southland Truck Men Open Club Rooms

One important unit of California Draymen's Association is the Truck Owners' Association of Southern California, which formerly, for three years, was Draymen's Association of Southern California. The new body, organized quite recently, has offices in Washington Building, Los Angeles, in charge of Phil Jacobson, secretary-manager; and on May 22 club rooms were opened at 513½ South San Pedro St. There was good food and fellowship, but both were incidental. Judge Channing Follette, chief speaker of the evening, delivered a straight-from-the-shoulder talk, saying in part:

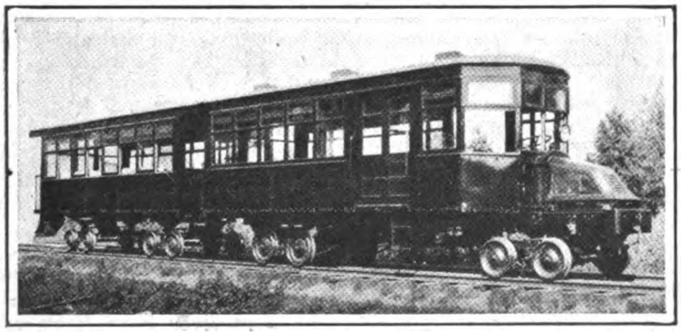
"You men have forged to the front in your industry with such rapid strides in the past two years, that you are now recognized as powerful competitors of the vested interests, the railroads and their allied industries. You are every day proving more conclusively to the public at large, the indispensability of the motor freighter as an economic factor.

"But you must remember, men, you are developing a powerful and far-reaching public utility, and as such you owe definite responsibilities to the public which you serve, and to those with whom you come in contact on the highways.

"Your careless drivers, road hogs, and overloaders, of whom there are far too many at present, are absolutely killing your industry. The public is against you, and I don't blame it a particle.

"You must convince the people that you have their personal interests at heart by actual deeds, before you can hope to obtain their favor for legislation moderate enough to permit you to continue your business on a profitable basis.

"There is a permanent lobby in Sacramento for the express purpose of legislating the motor truck off the highways. Its influence is not the least factor in moulding public opinion against you. Any story which gives your industry a black eye at present, is played up to the public, and you are going to experience considerable difficulty in getting your side of the story before the people.



CLAIMED TO BE THE ONLY REAL RAILWAY MOTOR CAR.

Edwards Railway Motor Car Co., Sanford, N. C., has developed a new type—the Edwards railway motor car. President Edwards says he believes it is the first real railroad job on the market; that it has been demonstrated successfully to many of the largest railroads in the country, and that claims for it are based on four years of operating cost experience. After experimenting with every type of standard truck drive, the company designed a 4-wheel drive of its own. It insures exceptionally good traction and enables running when snow and ice are present—something not hitherto achieved by converted motor trucks, it is claimed. The new truck was built by railroad men, rather than truck men. A before-and-after-using comparison with steam trains on a Southern railway, 25 miles long, showed the Edwards car saved $6500 in operating expenses and increased passenger revenue $6420, in a year—a total advantage of $12,920.

"You have before you a long, slow fight, and one in which you must exercise exceeding care, if you are to prove to your voters what I personally know, that the motor truck is a vital need, a new departure, a natural result of the evolution of transportation, in the world's march of progress.

"Therefore, gentlemen, be reasonable in your demands. Don't ask too much. Impress upon your employes the vital need of their keeping well within the dictates of the law at all times. Court the favor of your public with road courtesy and real co-operation in preservation of your highways. Then, and only then, will you get helpful legislation."

The meeting voted to communicate to the state association, in connecting with its executive session to be held at The Pines, near Fresno, May 29, a desire for statewide uniformity in motor truck regulations, and for such weight provisions, (possible by means of a 24,000 pound gross weight limit with a 2000 pound leeway), as to make the actual limit 26,000 pounds.

The meeting expressed willingness to have the tonnage tax increased 50 per cent, and favored a tax of 1 cent per gallon on gasoline.

President Frank Allen spoke of the need of more effective advertising of what motor truck transportation is doing for the public and of the large increase in payrolls and general prosperity it is producing. He said Los Angeles County contains 11,000 motor trucks—one-third of the state's total—and that by September the local body should have 6000 members to give power to concerted action.

Milo Bekins, the big transfer and storage man, also urged a campaign of educational advertising, not only by the association but by its members individually.

Mr. Weir, representing an indemnity company, urged the importance of bonding transportation companies and motor transport employes, to protect all concerned including the public.

Transport Sales Break Record

Transport Truck Co., Mount Pleasant, Mich., reports that the total number of orders placed by distributors for April delivery topped the record of any corresponding month in previous years of Transport history.

"We are certainly glad," says President M. A. Holmes, "that our factory facilities are such that we can keep production apace with sales; for that is our most important task right now.

"We have kept the faith. Our factory, built and thoroughly equipped for the exclusive production of motor trucks, has been in operation every working day in its history. Right through the last year we have maintained our sales force and built up our roll of distributors. The impetus that business is feeling now finds us well prepared."

For Republic Truck Coupon Clippers

Republic Motor Truck Co., Inc., Alma, Mich., announces that all coupons on its first mortgage and collateral trust 7 per cent serial gold notes which matured May 1, 1922, and any coupons on those notes which matured November 1, 1921, which have not been paid heretofore; also six months interest at 7 per cent upon series B notes which matured November 1, 1921, will be paid upon proper presentation.

Autocar Co., of Ardmore, Pa., has started an action in equity against Peters Autocar Co. and DeVillier & Co., Inc. The bill asks an injunction restraining the two corporations from using the name Autocar. The complaint says the good will embodied in the name is valued at hundreds of thousands of dollars.

70%

of all the metal wheels on motor trucks are SMITH WHEELS. Why? Because they are 100% right in design; 100% right in quality and 100% dependable.

The amount of a truck-maker's business nowadays is measured by the amount of his truck sales. SMITH WHEELS help sell trucks. They first sell the eye, then their performance helps keep the truck sold.

In selling trucks equipped with wood wheels in this metal age, the wood wheels in themselves put up a great sales resistance.

Our business in volume is almost back to where it was in the abnormal days of the war. Place your requirements with us as far ahead as possible to assure satisfactory deliveries.

PACIFIC COAST REPRESENTATIVES

A. H. COATES CO., 770 Mission St., San Francisco, California

SMITH WHEEL

SYRACUSE N.Y. U.S.A

Bus Lines Good Investment

Fortunes Comparable to Those Made In Interurban Traction Lines Loom for Small Operators

By **WALTER E. PARKER**, President Commerce Motor Car Co.

THE fast growing use of motor bus transportation gives promise of phenomenal development during the next few years, and will have a marked influence on the life of the nation. It carries with it great possibilities of profit to the small investor as well as for the great capitalist. The next few years will see the foundation of fortunes laid that will compare with those which were the development of the interurban traction lines during the past 20 years.

The motor bus transportation business, however, has this added attraction: To build and equip an electric line required so much capital investment, measured in not less than millions, that only those who command millions were able to engage in the business.

Motor bus transportation is open to the man with limited capital as well as the man with millons. From records of those operators now operating bus lines, we find the cost of operation to be less than one cent per mile per passenger, including all overhead, operating insurance and sinking fund charges. We have before us the records of a motor bus company, with an investment of $30,000, operating four motor buses on a certain route, that is earning 70 per cent for its stockholders, in addition to providing a sinking fund sufficient to maintain all necessary repairs and replacements and to retire the entire investment in equipment within four years, and it is doing this in a territory already served by electric railroads.

A motor bus seating 20 passengers requires an initial investment of from $4000 to $5000, and costs, including all charges specified above, just under 18 cents per mile to operate.

There are many districts in this country where a round trip route can be found easily where the distance traveled on the trip will not exceed 50 miles, and where a bus can make three round trips per day easily at a cost of $27; and if only carrying 60 per cent capacity, at a charge of 2½ cents per mile per passenger, the daily income will be $45, showing a profit of $18 per day.

With these possibilities, capital will be attracted to the business, and stocks of motor bus companies will become fashionable with investors all over the country.

New companies, both small and large, are being formed to take care of the demand for motor bus transportation. Motor truck factories will be busy supplying the demand for motor buses, as the United States is full of far-seeing men who are quick to grasp an opportunity and who will wish to be among those who are the first to ride into fortune on a motor bus.

Radio Music on Stage Runs

California Transit Co., Oakland, operating 85 White trucks to carry passengers and baggage between Oakland and Central California cities and towns, is running a radiophone-equipped stage, and if it is successful as a means of entertaining passengers on long trips the company will equip many others of its vehicles likewise.

By means of a two-step short wave receiving outfit and low antenna, radio concerts from San Francisco and Oakland were picked up at points nearly 50 miles distant. Driving the stage slowly and amplifying the music by magnavox makes it as audible with the truck in motion as it would be standing at the curb. The antenna wires are strung over the long top between two firmly braced crosslike supports, one in front of the radiator, the other at the rear of the truck. The apparatus is installed on the instrument board, and the driver can "tune in" without leaving the wheel.

Bethlehem Truck Production Looms

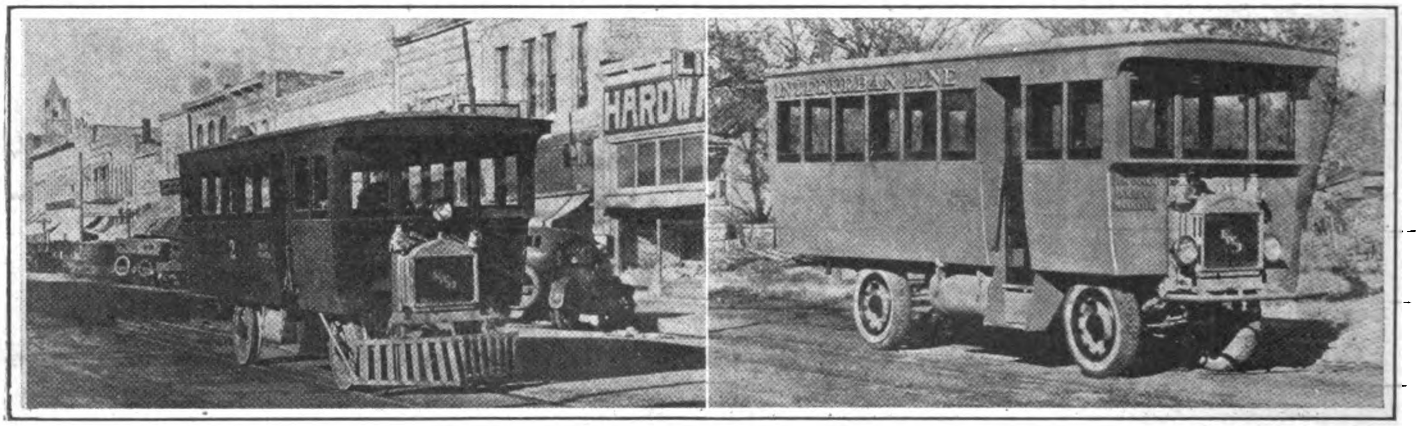
Merchandise creditors of Bethlehem Motors Corp., Allentown, Pa., virtually have decided not to oppose sale of the plant to a syndicate represented by Arthur T. Murray, the former president, and Howard B. Hall, former vice president. Their bid was $550,000. It is understood Messrs. Murray and Hall will be backed in a reorganization of the company by banking interests which stood behind the original corporation. Production of trucks will be resumed as soon as the sale is confirmed.

Mexico Increases Use of Trucks

Imports of American motor vehicles into Mexico, consisting of 6750 cars and 1482 trucks in 1921, showed an increase compared with 1920. Shipments may be expected to be even greater this year as automobiles, in view of government attitude, are sure to contribute considerably in developing outlying sections. Already mining companies and oil operators, who have constructed roads between their properties and railroads, gradually are replacing ox teams with trucks.

Many Railroads Use Motor Buses

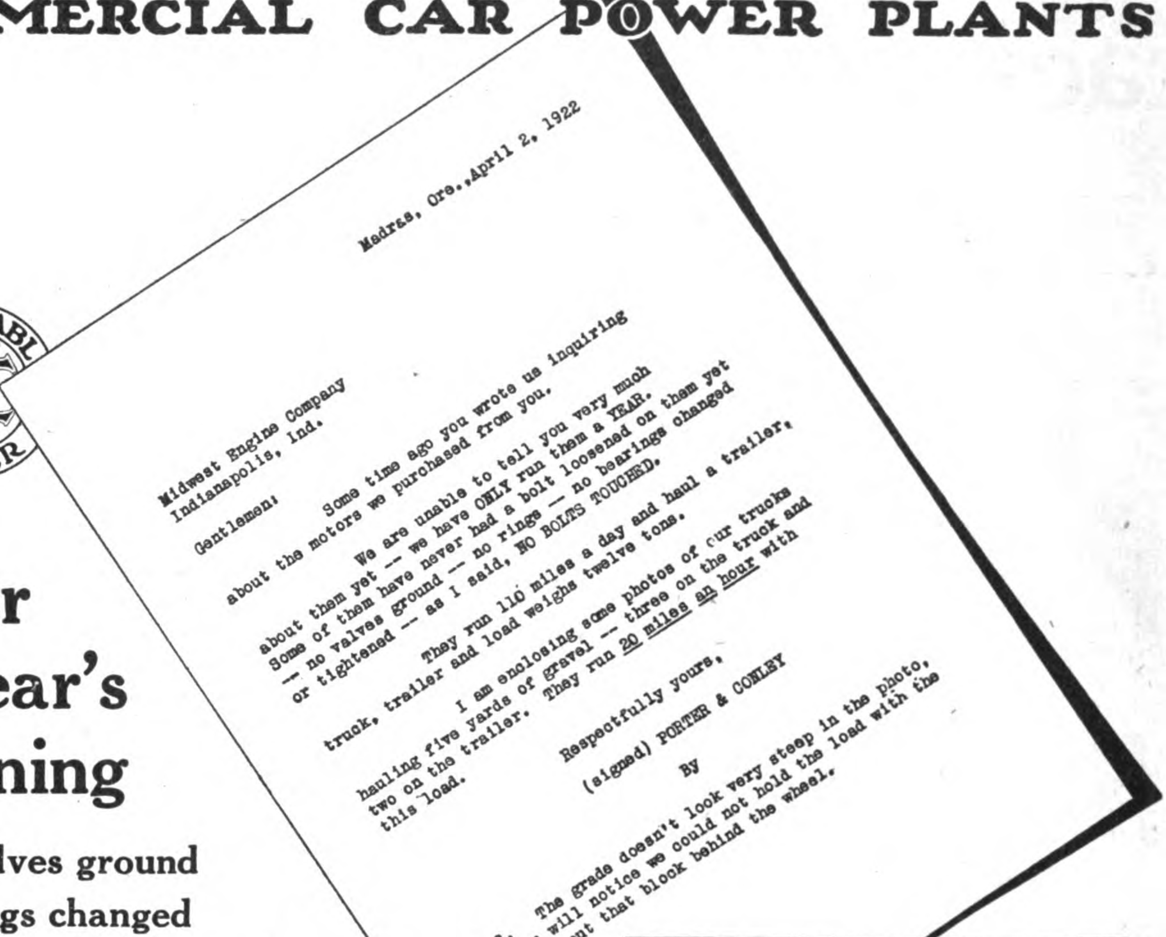
Motor buses are being used by 32 electric railways in the eastern part of the United States, and motor buses with flanged wheels are being used by 28 short line steam railroads.



FOUR-WHEEL-DRIVE RAIL CARS PROVE THEIR WORTH COMPARED WITH ELECTRIC TROLLEY CARS IN KANSAS.
Formerly it cost 50 cents a mile, using 60,000 pound electric trolley cars. Now it costs about 15 cents a mile, using 7200 pound (chassis weight) four-wheel-drive, gasoline-propelled cars made by Four Wheel Drive Auto Co., Clintonville, Wis. That is the experience of a street and interurban railway company in Manhattan, Kas., which has scrapped its former equipment, reduced its number of employes, eliminated a power plant and three substations, much noise, liability of damage suits formerly caused by electric cars jumping the tracks, the overhead trolley wire and pole nuisance, and giving much more satisfaction to all concerned. The new cars have the same chassis as is used in the standard FWD 3 ton truck, except for such changes as rail service necessitate. The cars have 156 inch wheelbase; gears which enable as much speed in reverse as forward; and so on.

MIDWEST

COMMERCIAL CAR POWER PLANTS



Madras, Ore., April 2, 1922

Midwest Engine Company
Indianapolis, Ind.

Gentlemen;

Some time ago you wrote us inquiring about the motors we purchased from you.

We are unable to tell you very much about them yet -- we have ONLY run them a YEAR. Some of them have never had a bolt loosened on them yet -- no valves ground -- no rings -- no bearings changed or tightened -- as I said, NO BOLTS TOUCHED.

They run 110 miles a day and haul a trailer, truck, trailer and load weighs twelve tons.

I am enclosing some photos of our trucks hauling five yards of gravel -- three on the truck and two on the trailer. They run 20 miles an hour with this load.

Respectfully yours,

(signed) PORTER & CONLEY

By

P. S. The grade doesn't look very steep in the photo, but you will notice we could not hold the load with the brake so put that block behind the wheel.

After a Year's Running

No valves ground
No rings changed
No bearings tightened
No bolts touched
No bearings changed

The overwhelming success of MIDWEST engines is based on two things — performance-ability and the spontaneous approval of the USER.

A new booklet of engine facts is just off the press. Your copy —where?

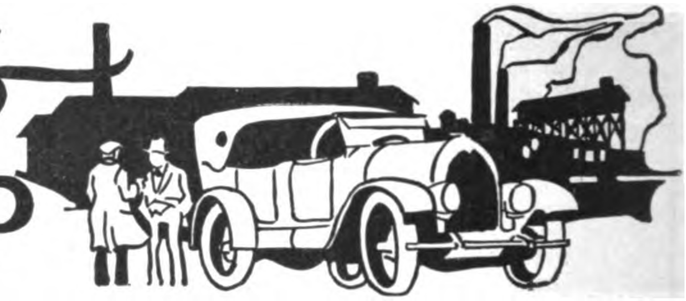
ADDRESS DEPT. 12

MIDWEST ENGINE COMPANY
INDIANAPOLIS, U. S. A.

DEPENDABLE POWER

FORGET BORE AND STROKE — — IT'S PERFORMANCE THAT COUNTS

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

There were produced in April 213,000 motor vehicles. The March figures were 173,342. In the peak month of production, March, 1920, there were turned out 220,000 vehicles, and April came within 7000 of that figure and would easily have surpassed it had it not been for the shortage of materials, and more particularly of bodies. To-day the automotive industry, as far as passenger cars are concerned, is almost on a 100 per cent basis, the percentage being controlled entirely by the question of obtaining the necessary materials.

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The truck business, while claimed to be at 50 per cent of top production hardly is over 25 per cent, according to inner information; but that department of the business is improving steadily.

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It needs but trips through the country, the sight of activity in building, road work and many other things, to learn why the motor truck business has picked up. Again large fleets of trucks are seen actively hauling away excavated materials, and hauling in materials for building. Motor truck fleets, disseminated during the lull, are being brought up to date. Truck building is due for greater gains steadily.

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Makers of light trucks look for more than 200 per cent gain over last year, and makers of heavy trucks, 100 per cent gain. The tractor people expect a 200 per cent betterment.

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Tractors, to the surprise of all, are once more proving a real business. This branch has not been expected to look up in spite of drastic reductions until farmers had brought in the 1922 crops. But the farmers had to have tractors. They have been slow in resuming the purchase of passenger cars, and it is believed they will make the start when crops mature and are marketed. If so, the makers face a steady year of business.

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Estimates of 1,700,000 to 1,800,000 vehicles for 1922 have been revised generally and many now predict the passing of the 2,000,000 mark without trouble, in view of the April production and the present state of business in general. Other lines of business show improvements. Mr. Hoover says that the corner has surely been successfully rounded. For instance, steel, which during the summer months of last year only reached 22 per cent of normal, now is above 70 per cent and active. It is stated in financial circles that U. S. Steel Corp. is operating at 80 to 85 per cent of normal.

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Whatever is said or done, the year 1922 has now a start which will make it a mighty good year for the industry, for headway has been gained which cannot be checked until last year's record has gone by the board, anyway. Blind pessimism alone can now dispute the real conditions. No one is looking for a boom this year. Few want one next year, or the next. All would like to have the business stabilized and kept so.

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It is stated that the demand for cars now is not spotty but universal, and that it comes from every section, including many where it was believed there would be no business at all this year, or at least until after crops had been brought in. Demand for used cars has been a feature of the last month and the old bugbear, stagnation in the used car market, and business-breaking stocks, promises to be wiped out.

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It is said the extraordinary business now being enjoyed in the automobile field is due mostly to the fact that so many cars were run over last year, when ordinarily, with business normal, there would have been exchanges for new cars. During the winter dealers and distributors did not stock up, and as winter buying was light the sales came over to the first quarter of this year. Increasing demand for motor transportation is responsible also, and the moving forward of general business has brought its rewards to the automotive makers.

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Stabilization of prices finally, and the value given by the makers to the buyers, had a lot to do with opening the buying this spring. It has been said, rightfully, that never before have buyers received as much value for their money. Buyers are motor-wise and, with possible increases in prices, have come forward and bought.

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There is more to be learned of the real status of the business by listening in and gauging gossip than by trying to gather actual facts. So many rank misstatements on the part of car makers will not stand checking through the medium of the parts, accessory and equipment makers, that the general tenor of conversation is a far superior index. It may be said without equivocation that optimism is very marked, not only among the manufacturers but among dealers and distributors around Detroit, Cleveland and Indianapolis hostelries.

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Indicating confidence, manufacturers of cars are buying on schedules of 90 instead of 30 days, giving the material men better chances to get into operation on a more satisfactory scale.

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Parts and accessory manufacturers are delighted, for their business will gain several hundred per cent over last year, due to inventories having been cleared.

—

Dealer organizations which were disrupted are being restored, and oldtime dealers who retired under stress of the times are returning, while many new men are entering the field, on which their eyes have been set for many months. The newcomers have awaited return of general business before starting the battle, and travelers for the makers say a surprising number are anxious to obtain good cars to handle.

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Again there are trainload shipments to main distributing centers, something unheard of for many months; in fact for almost two years; always excepting California.

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The Federal Reserve bankers in all twelve districts are expressing wonder at automotive industry's remarkable recovery. They state that right now the buying is largely from cities, and that farmers will begin to buy in about two months.

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Bankers apparently have loosened up after having weeded out the incompetents. A New York banker is reported as being much encouraged by the fact that some New York dealers and distributors took up paper in April not due until June 1.

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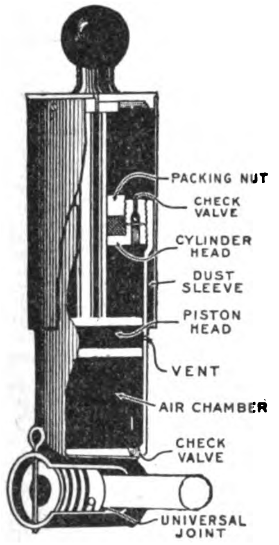
The number of failures in the business has been far below expectations, and many who failed are getting back on their feet. Very few companies will pass out, it now appears.

HOLDEN AIR SHOCK ABSORBERS

RIDE ON AIR



Have You Asked for Our Proposition

MR. DISTRIBUTOR—MR. DEALER

If Not, Why Not? It's a Winner

There is a HOLDEN for every make of car. They do what shock absorbers are supposed to do and are sold at a price that a Ford or a Dodge or a Buick owner can afford to pay as well as the man who drives a Cadillac or a Packard or a Pierce Arrow. Think it over and WRITE OR WIRE. Your territory may be open.

PROMOTE COMFORT—INSURE SAFETY

NO
Oil
Springs
Rattle
Side-sway

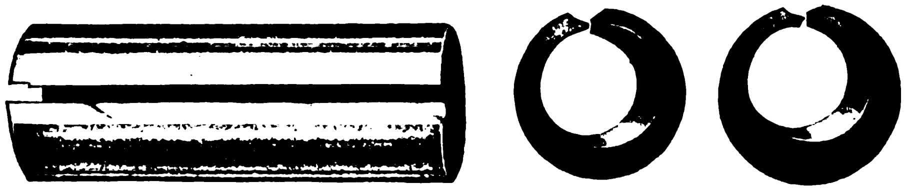
NO
Pumping Up
Adjustments
Upkeep
Mutilation of Car

NO SHOCK—NOT EVEN IN THE PRICE

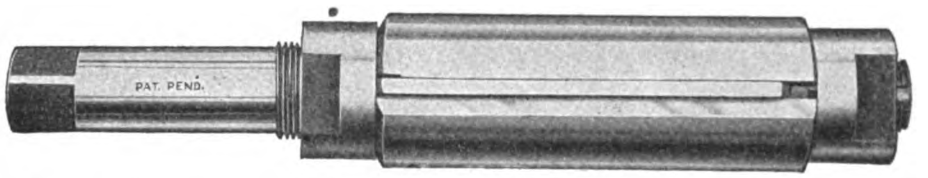
HOLDEN AIR SHOCK ABSORBERS use air to absorb both the impact and rebound shock. The method of installation positively eliminates side-sway and preserves the center of gravity. They will carry overload regardless of spring capacity. They require no attention of any kind and will outlast the life of the car.

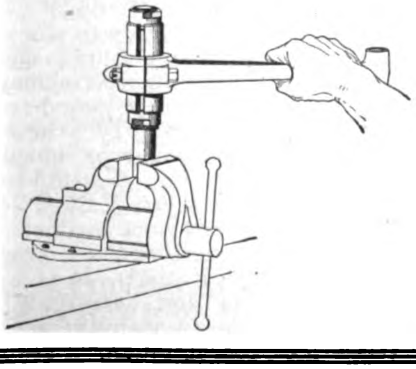
HOLDEN SHOCK ABSORBER CO. LTD.
3105 SAN PABLO AVE. OAKLAND, CALIFORNIA.

The THOMASON Bearing Reamer



A Perfect Job in One Tenth the Time





Your inexperienced helper can ream a connecting rod bearing in 15 minutes—a perfect job! He clamps the Thomason Bearing Reamer, as shown, slips the babbitted bearing on the sleeve, and works the rod round and round—that's all! Leaves a surface absolutely accurate and smooth as glass!

Sleeves are provided for various size bearings, but the cutting edge always projects one thousandth of an inch above sleeve opening. Substantial profits on a small investment. Write your jobber or us for prices.

SHEPARD - THOMASON COMPANY
Automotive Engineers LOS ANGELES, CAL.

Van Is Apperson General Manager.

The more motor trade background a man has, the more interesting will be the news that N. H. Van Sicklen has been appointed general manager of Apperson Brothers Automobile Co., Kokomo, Ind., For the new Apperson executive has had an intimate and influential connection with motor cars ever since the first "horseless vehicle" stuttered down an American highway.

It is peculiarly fitting, too, that Mr. Van Sicklen should be chosen to guide Apperson policies, since he was an early Apperson "fan." For years he drove the very first car turned out at Kokomo in the famous 4 cylinder line of Jack Rabbit models. The first Jack Rabbitt radiator ornament was also made and mounted on the Van Sicklen car. The original, in polished brass, is now a feature of General Manager Van Sicklen's office at Kokomo.

But Mr. Van Sicklen's interest in wheels goes back far beyond the advent of the motor car. He rode his first high-wheel bicycle in 1878. In 1882 he won his first race, and for the nine years succeeding he was an important contender in the series of track and road races which swept the country, winning more than his share of cups, medals, and purses.

Meanwhile, he had established a printing business and began in 1890 to publish The Bearings, a journal of the bicycle trade. This he carried on until 1898, when it consolidated with two other papers and became Cycle Age. Later on he sold his interest in the latter, and turned gentleman farmer.

Farming for fun, however, proved too static, and Mr. Van Sicklen returned to active business in February, 1901, as an American Steel and Wire representative. Trade journalism still had its lure and after buying Motor Age from Samuel A. Miles, he quit steel in September, 1904, and for four years gave all his time to publishing.

Selling Motor Age in January, 1908, he became branch manager at Chicago for Knox Automobile Co. Later, the value of the Automobile Blue Book appealing to him, he had a hand in developing that, disposing of his interest in the fall of 1910. Then he took charge of the F. A. L. Motor Car Co., an early exponent of the long-stroke motor in America, and continued at its head until the sale of the business.

Mr. Van Sicklen lent his gift for organization to the Chicago Motor Club and the Chicago Automobile Association about this time, serving as president of both bodies and contributing not a little to the stabilizing of motoring and the motor trades in Chicago and its vicinity. In February, 1913, he began to build the Van Sicklen speedometer, developing the business into an important enterprise before it was taken over in the fall of 1919 by John N. Willys, and later disposed of to Stewart-Warner.

During the war, Mr. Van Sicklen and his organization were largely occupied with the development and manufacture of special instruments for the aviation departments of the Army and Navy. After the sale of his speedometer interests, Mr. Van Sicklen, in his own words, remained "foot loose and fancy free" until he joined the Apperson organization early in March, as assistant general manager. His speedy advancement to the responsibilities of general manager of this old and highly regarded institution is in keeping with the successive events of his picturesque and influential career in the motor industry.

* * *

Good Maxwell's Good Quarter.

William Robert Wilson, president of Maxwell Motor Corp., states its production for the first quarter of 1922 was slightly more than 340 per cent more than for the first quarter of last year. Its business has shown a steady and gratifying increase ever since the announcement of the new series of the good Maxwell last November, and in April the demand so far exceeded greatly increased production that the plant began May virtually six weeks behind on orders. About 2500 men have been added to the payroll since the first of the year. Many departments are working day and night and much new machinery has been installed.

N. H. VAN SICKLEN.

Mr. Van Sicklen, an Apperson fan from 'way back, became assistant general manager of the company in March and now is general manager.

* * *

To Sell Parenti Property.

Marine Trust Co., Buffalo, trustee for Parenti Motors Corp., has abandoned efforts to resuscitate the company, and announces its intention to sell the property and distribute the proceeds to the creditors. Debts already field show a total of $400,000, and the valuation of assets shows not more than $388,000.

Daniels Motor Speeds Production.

President George E. Daniels, of Daniels Motor Co., Reading, Pa., is highly gratified with the outcome of the new financing which involved the sale of $1,000,000 of 8 per cent cumulative preferred stock, which enables going ahead with the expansion program. Every effort will be exerted now to turn out cars fast enough to meet the increasing demand.

By the sale of the new preferred stock the company has been placed in position to liquidate all its bank loans and add to its working capital.

It is reported that Paul du Pont, of Wilmington, Del., president of du Pont Motors, Inc., and his associates have become actively identified with Daniels Motor Car Co., and that Mr. du Pont has taken a substantial financial interest. George E. Daniels, president of the company, denies the report that he has decided to resign.

* * *

Four New Men with Anderson.

The factory wholesale organization of Anderson Motor Co., Rock Hill, S. C., has been increased to take care of the growing demand for 1922 model Andersons. This demand has been evidenced by the large number of orders received at the factory from dealers throughout the country.

George M. Wallace has been assigned to the New England territory, with headquarters in Boston.

Gordon L. Hill will work from Pittsburgh, covering Western Pennsylvania, Ohio, and Eastern Kentucky.

M. C. Butler is traveling the Michigan territory and Charles G. Kay in Washington, both operating from the Anderson wholesale office at Chicago.

* * *

Nash Passes 100,000 Mark.

Nash Motors has passed the 100,000 mark in point of passenger car units produced. In actual figures there have been built and sold, since its introduction four years ago, 104,245 Nash passenger automobiles. In April, Nash Motors had the greatest single month's sales of passenger cars in its history, completely overshadowing even August, 1920. Now comes May, with orders received up to the 15th of the month 31 per cent in excess of April. January, February, and March started the breaking of records, with a volume of sales that exceeded the same 1921 period by 51 per cent.

* * *

May Reorganize Crow-Elkhart.

Efforts are being made to reorganize Crow-Elkhart Motor Corp., Elkhart, Ind., which went into receivership several weeks ago. It is proposed to have the assets taken over by a new corporation which would be known as Century Motors Co. Noteholders of Crow-Elkhart are being asked to accept first preferred stock in a new company, and merchandise creditors second preferred stock. It is understood interests not heretofore connected with the company have undertaken the reorganization.

You'll Feel at Home at the Botsford

When Motor West selected this comfortable, home like, and fire-proof hotel as San Diego headquarters for all who read and travel, the three chief demands of the well-read traveler were considered.

LOCATION - SERVICE - ATMOSPHERE

Manager Floyd B. Kirk takes especial pride in the central location of his house—just north of Broadway on 6th street—the courtesy extended to guests by all employes, the up-to-the-minute accommodations he has to offer, and the cozy lure of hominess that pervades his entire establishment.

Before you start, be sure of Special Rates and Reservations by wiring—

HOTEL BOTSFORD
SAN DIEGO, CAL.

Rickenbacker's Red Letter Day.

Bedecked with gay ribbons and Hat In the Ring pennants, the one-thousandth motor car rolled off the production chain at the Rickenbacker factory in Detroit, May 10, signalizing the first red letter day in the history of Detroit's youngest and most aggressive automobile manufacturing organization. As the company had been on a volume production basis barely 60 days, the fact of producing 1000 motor cars in the period of three months is a wonderful record.

Elated over the achievement, Capt. Eddie Rickenbacker and his associate executives arranged a celebration. The one-thousandth car, a coupe, was assembled in the presence of the Rickenbacker officials and a distinguished crowd of invited guests, who followed it through the final assembly until it was delivered to the testers. The Hat in the Ring insignia and ribbons had been put on as the car progressed along the chain.

Captain Rickenbacker stepped forward and invited Mrs. B. F. Everitt, wife of the president of the company, to take the first ride in the car. There was some good natured rivalry for the other two seats, which finally fell to B. F. Everitt himself, and Charles Kaar, of San Francisco, Rickenbacker distributor on the Pacific Coast, who was at the plant endeavoring to have his allotment increased.

The car left the factory yard amid cheers and the tooting of horns and quickly made its regulation test trip, which was done smoothly and in perfect order.

Mr. Kaar insisted that the one-thousandth car be shipped to the Kaar Motor Car Co., San Francisco. Harry L. Cunningham, of the Cunningham-Richards Co., Michigan distributor, challenged him. They finally tossed a coin and Mr. Kaar won.

The next step in the Rickenbacker development, officials say, will be the increasing of present production to 50 cars per day with all speed possible. It has averaged 30.

* * *

N. A. C. C. Honors Radoye.

Gilbert U. Radoye, director of advertising and sales promotion for the Haynes Automobile Co., Kokomo, Ind., has been appointed on the advertising committee of the National Automobile Chamber of Commerce. Five other nationally known advertising executives have also been appointed on the committee, which consists of the following personnel: Edward S. Jordan, Jordan Motor Car Co., chairman; W. K. Towers, Paige-Detroit; L. B. Dudley, Federal Truck; A. B. Batterson, Buick; G. H. Phelps, Dodge; and Mr. Radoye. The committee will act in an advisory capacity on matters pertaining to national advertising and will arrange the semi-annual meetings of advertising managers, with regard to programs and discussions.

* * *

Amazon Has New Sales Manager.

William J. Shea, formerly central district manager of Portage Rubber Co., has been appointed sales manager of Amazon Rubber Co., According to Mr. Shea, Amazon prospects are exceedingly bright, and production was to be more than doubled during May.

AC

The Standard Spark Plug of the World

Every motorist is a prospect for the sale of AC Spark Plugs because most cars are factory-equipped with AC's and there are specially designed AC's for all other engines, too.

A C Spark Plug Company
FLINT, *Michigan*

LOS ANGELES WAREHOUSE COMPANY

MAKES A SPECIALTY OF AUTOMOBILE STORAGE

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
14727, Main 4787

Prudden and Gier Plant Additions.

Taxed to capacity by orders which have necessitated overtime production in both the wood and steel wheel departments, as well as in the Gier stamping plant, Motor Wheel Corp., Lansing, Mich., has just let a contract for the construction of two additional factory units.

The addition to the Prudden plant will be approximately 120x400 feet and the addition to the Gier plant about 130x225 feet. Work will start immediately on both, and the completion in about 60 days will not only release space in the present plants needed for various departmental expansions, but will supply a very considerable area of added manufacturing space.

While continuously increasing demand for wood wheels, both for passenger cars and trucks has influenced these new additions, the sudden excessive demand for Gier Tuarc steel wheels has been the principal factor. In addition to the extensive production of Gier Tuarc steel wheels for replacement business on 86 models of cars now in use, Motor Wheel Corp. is supplying these wheels as standard equipment on various models of Buick, Columbia, Gardner, Liberty, McLaughlin, Oakland, Oldsmobile, Packard, Paige, Reo., Rickenbacker, and Westcott cars.

* * *

Wilson is Prudden Works Manager.

W. H. Wilson has been appointed works manager of the Prudden plant of the Motor Wheel Corp. at Lansing, Mich. Mr. Wilson has been identified with the automotive industry since he helped to build the first three cars turned out by Oldsmobile. Later he became chief inspector at Olds and subsequently was with the Cadillac and Leland organizations. During the war he was in charge of the Wright-Martin plant, which produced the Hispano Suiza aircraft motors built in this country. Later he returned to Cadillac and then went to the Elizabeth plant of Willys Corp. He left Willys to join Motor Wheel.

* * *

Garlent Heads Two Plants.

J. E. Garlent has been appointed works manager of the Auto Wheel and Gier Pressed Steel plants of Motor Wheel Corp., Lansing, Mich. Mr. Garlent assumes charge of operations in both divisions after considerable experience as works manager of each separately. It was decided to combine the works management of both under one head for greater efficiency in the operation of these two large units of the corporation.

Before joining Motor Wheel, Mr. Garlent was factory manager for Hupmobile and factory manager of the King plant, and he is widely known.

* * *

Too Busy to Shorten Week.

Ford Motor Co. announces the five-days-a-week program announced by Edsel Ford some weeks ago will not take effect until late summer, by which time the Highland Park plant will be re-equipped. Rush of business in the past few weeks has caused the company to resume its former six-day schedule, and it is running about 4000 cars daily.

* * *

Estimated Durant Production.

Production for the Durant line for the second quarter of this year is estimated conservatively at 14,000. The output at Long Island City will be at least 6000; at Lansing, 5000; at Toronto, 1500; and at Muncie, 1500. This does not include 1000 of the new Stars which will be turned out in June at Long Island City and Lansing.

* * *

Buick to Use Scripps-Booth Plant.

H. H. Bassett, president and general manager of Buick Motor Co., Flint, Mich., announces his company has acquired the use of the Scripps-Booth plant in Detroit, and will operate it for assembling. Manufacture of the Scripps-Booth car was discontinued some months ago. It is understood General Motors Corp. is making service arrangements for Scripps-Booth cars now in use.

CHARLES S. CRAWFORD.

Young in appearance and spirit, a veteran in automotive creative experience, Mr. Crawford, is announced as chief engineer of Stutz Motor Car Co. of America.

* * *

Studebaker Plant Expansion.

Studebaker Corp. has begun the expansion of its plant for which the directors have authorized expenditure of $3,000,000. The new structure will include a closed body building factory and car storage and shipping buildings. They will permit an increase in the production of light sixes from 200 to 300 a day. The building program which has been mapped out will require the eventual expenditure of $15,000,000 and will cover five years.

Crawford Is Stutz Chief Engineer.

Another addition to the staff of executives of Stutz Motor Car Co. of America, Inc., Indianapolis, is announced by President William N. Thompson. It is Charles S. Crawford as chief engineer.

Mr. Crawford is one of the best known engineers now active in the industry. In years past he has served Lozier, Cole, and Premier in an engineering capacity and more recently has been devoting himself to consulting work. He is stated to have designed the first car which Cole Motor Car Co. built and during the seven years that he was with that organization he laid out the plans for all the cars produced by it, including, in addition to the early Cole 4 cylinder models, several sixes as well as the Cole Eight.

Mr. Crawford's work in connection with the early development of 8 cylinder design in this country attracted widespread attention. He prepared the first paper on 8 cylinder construction circulated by the Society of Automotive Engineers and was called upon for many contributions by the trade press and engineering organizations of Great Britain and France.

In his connection with the Stutz Co., Mr. Crawford will devote himself to a further development of the D-H engine, the latest product of the Stutz factory, which has attracted considerable attention since its introduction a short time ago. It is said that the addition of Mr. Crawford to the engineering staff of the Stutz Co. is a forerunner of other additions to the various departmental corps at the factory, in line with the new program of enlargement and expansion which was inaugurated early this year.

* * *

Hudson Earnings Treble Average.

Earnings of Hudson Motor Car Co. now are at the rate of $5,000,000 per annum, after taxes. The average for 1910 to 1921, inclusive, was $1,266,000. Direct entries to surplus have been made each year, aggregating $10,508,287. The total volume of business for this year by the new company will be about $55,000,000.

* * *

Grant May Sell Walker Interest.

Grant Motor Car Corp., Cleveland, told its stockholders negotiations are well under way whereby the company's financial status will be materially improved by the sale of its interest in the H. J. Walker Co., which manufactures engines. A full report of this transaction will be sent out later.

* * *

Production is to begin soon at the $25,000,000 Dunlop tire plant at Buffalo, according to A. L. Kinsey, president of Buffalo's chamber of commerce.

* * *

J. E. Harris, well known in the tire world, has joined the Ardmore Akron Tire & Rubber Co., Oaklahoma City, as vice president in charge of sales.

Oakland's Intensive Inspection.

One out of every seven employes of the motor department of Oakland Motor Car Co., Pontiac, Mich., is an inspector. This is in addition to the foremen and assistant foremen. In addition to this large inspecting force, devoted to seeing that every motor comes up to requirements, each employe is an inspector of both his own operation and that of the fellow worker who performed the previous operation. Each employe has on his bench a set of production gauges for this purpose.

Particular attention is paid, in the building of the Oakland motor, to cleansing every part of the motor thoroughly with from 3 to 12 washes of dry air, steam and washing compound. Not a particle of dirt or grit is allowed to get into the parts that go into the finally assembled motor. As much care is given these washing operations as to the various machining operations.

After the motor is assembled it is run for 8 hours, and after that is given a test in the "silent" room, to detect any noise that might indicate an irregularity.

This inspection is particularly rigid, officials explain, because of the remarkable 15,000-mile guarantee on the 6-44 models, against what is commonly termed "oil pumping."

* * *

Torbensen Forms New Company.

Viggo V. Torbensen has formed Vig Tor Axle Co. in Cleveland, to manufacture passenger and commercial car axles. For a number of years Mr. Torbensen was president of Torbensen Axle Co., and has been active in the industry for the last 26 years. The new axle has been designed by him. Among those associated with him are A. L. Kroesen, as vice president and general manager, and who was with Timken-Detroit Axle Co. for a number of years; W. N. Jackson, treasurer, long with Mr. Torbensen; C. R. Harrison, secretary; and B. A. Fleming, assistant secretary.

* * *

Newmark Goes to Durant.

J. H. ("Jake") Newmark, for many years advertising manager of Chevrolet Motor Co., previous to his transfer to Detroit as an advisor on the staff of General Motors, has resigned from G. M. C. to take charge of Durant advertising for the New York, Lansing and Toronto plants, under the direction of M. B. Leahy, general sales manager. His headquarters will be at Long Island City. Before going to Chevrolet Mr. Newmark was with Apperson Bros. Automobile Co., Kokomo, Ind., many years.

* * *

The Industry Recognized.

The automobile industry is strongly represented on the new board of directors of the Cleveland Chamber of Commerce. F. C. Chandler, president of Chandler Motor Car Co., who served last year on the board, was reelected, and Edward S. Jordan, president of Jordan Motor Car Co., was made a member. Newton D. Baker, formerly secretary of war, was elected president.

* * *

Reo Sends McCoy to Canada.

David B. McCoy, advertising manager of Reo Motor Car Co., Lansing, Mich., has been transferred to Windsor, Ont., in charge of Reo's Canadian end. Before joining Reo he was with General Motors and traveled in Europe for that organization.

* * *

Dodge Brothers' British Plan.

Instead of requiring its dealers in Great Britain to finance personally car shipments from Detroit, Dodge Brothers have organized Dodge Brothers, Ltd., which will handle sales as intermediary.

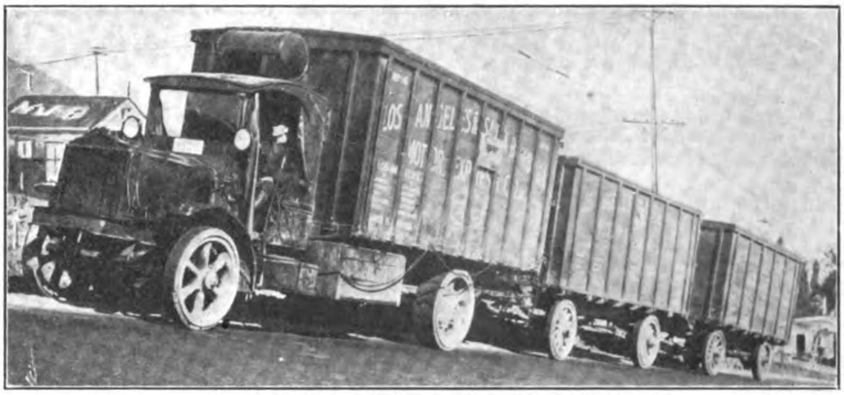
* * *

White Now Packard's Chief Buyer.

George White, assistant purchasing manager of Packard, has been appointed purchasing manager, to succeed F. W. Boynton, who resigned to take an executive position with Anderson Electric Car Co.

* * *

Ford Motor Co. has increased its dealers' discounts on cars and trucks from 17½ to 20 per cent, and on tractors to 25 per cent, from 17½ and 5.

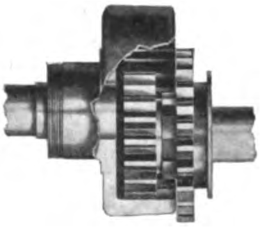


More Power to You with AHLBERG Transmissions

THE above illustration is an actual reproduction of a White truck owned and operated by the Santa Barbara Red Line hauling a capacity load on both truck and trailers over the Newhall grade. This truck is equipped with the Ahlberg Dual Transmission.

The Ahlberg Dual Transmission is an auxiliary gear set which increases or decreases the gear ratio as desired in all speeds for Ford, White, Mack and Dodge Bros. Trucks.

It deviates from present accepted methods and provides an entirely new and novel means of transmitting power that is simple, compact and silent, creating a minimum of friction.



This is accomplished by the use of only two working gears — one internal and one spur gear. The internal is brought into mesh with the spur radially instead of laterally, thus insuring against stripping the teeth while shifting, and when driving direct no gears are in action.

Hundreds of these transmissions are now in use.

Truck owners or dealers interested in this equipment should write for folders, list of users, and other particulars.

K. E. AHLBERG CO.
120 W. 22nd Street. Phone 209-55
Los Angeles, Calif.

New Things in the Accessories Field

SMITH LIFT-OUT PULLER

Of the two illustrations herewith, one shows the Smith Lift-Out car puller, the other its application. It weighs only 7 pounds, can be carried in the car, and its maker, C. F. Smith Mfg. Co., De Kalb, Ill., says that with block and tackle it will pull a car through hub-deep mud. It is self-locking. It can be attached to a fence post, telephone pole or stake driven in the ground. It has 8 feet of pulling chain and 4 feet of anchor chain with hooks. It is also suitable as a garage hoist, for lifting cars of any weight, so as to work beneath them. Retail price of No. 1 is $10; No. 2, $20. There also is a 25 pound model, for large cars and trucks, at $20.

SMITH LIFTOUT
NO. 1
SELF LOCKING

SMITH LIFT-OUT CAR PULLER.

SMITH PULLER APPLIED TO CAR.

GOODYEAR CROSS-RIB TIRE.

Goodyear's new line of tires to sell at popular prices, Cross-Rib cord, on account of the cross-rib tread design, will be a companion line to the well-known All-Weather tread tire. The new tire will be marketed through Goodyear service stations only, and at 20 to 25 per cent less than the All-Weather. It has been in development and testing a number of months and will be ready for general distribution in June.

"There are two reasons for bringing out the new line," says the Goodyear statement. "One is to give our dealers a tire to meet the needs of customers to whom first cost is important. The other is to give dealers a tire for so-called commercial accounts, meaning firms that have a number of trucks and buy in quantities.

"Two changes only in the construction of the tire, as compared to the All-Weather tread tire, have been made to effect the lowered prices. The tire, however, should give as high a mileage per dollar as the All-Weather tread.

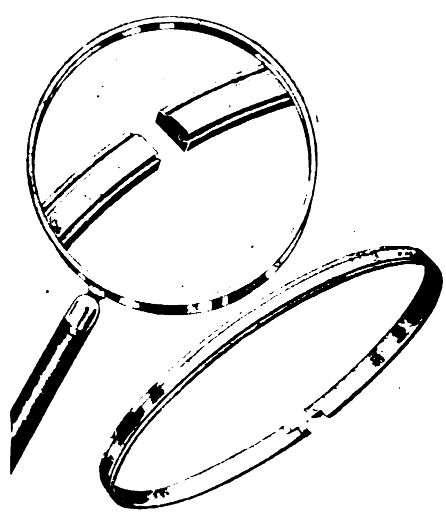
"The Cross-Rib cord tire is a one-cure tire, as against the two-cure process used on All-Weather tread tires.

"Second, the design used on the tread permits an economy in the volume of rubber used. The All-Weather tread, being designed for maximum traction and non-skid properties, uses more actual rubber in the tread than perhaps any tire on the market. The tread rubber in the Cross-Rib cord, however, is a tough, slow wearing stock that should give excellent mileage.

"The cord fabric used in the new tire will be of the same quality of long staple Arizona Pima cotton as for the All-Weather tread, and the rubber will be of the same grade exactly, except in the tread. The tire will be the same full oversize as the All-Weather tread except in the 30x3½ size."

OIL KING PISTON RINGS.

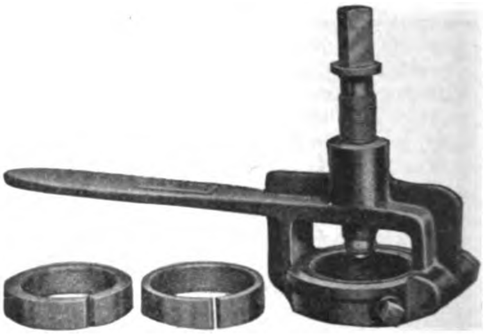
Oil King piston rings, distributed on the Pacific Coast by Dygert & Siemers, 537 Chamber of Commerce Building, Los Angeles, are of tough, close-grained gray iron, individually cast, step-cut and machined, so that severe wear on the cylinder walls is prevented. In the design, a ball head at the top of the ring distributes oil evenly on the cylinder walls, while presenting no scraping edge on up stroke. The cut above ball head is the oil seal, and holds the oil on down stroke by capillary attraction. Narrow wearing surface permits quick seating, in 20 minutes. Centrifugal oil groove at 45 degree angle presents shaving edge on down stroke, giving oil a centrifugal action back into the groove, keeping groove clean, with no square corners to collect carbon, while 45 degree angle gives enough toe to both edges to prevent clipping. Oil King rings sell at 75 cents for sizes up to and including 4 inches, and $1 above that size and up to 5 inches.



OIL KING PISTON RING.

THOMASON WHEEL PULLER.

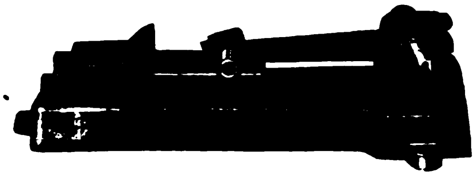
The Thomason Universal wheel puller was mentioned in the May 15 issue, but a "boner" was pulled when the wrong illustration was used. The right one appears herewith. The Thomason device is being used in repair shops to remove wheels from practically all makes of cars. The stripping of threads is prevented by tremendous clamping power being exerted on the hub. When pressure is applied, no metal is dragged up, a steel balled imbedded at the point of the screw preventing. This wheel puller assures a quick, clean job. It is one of the products of Shepard-Thomason Co., Los Angeles.



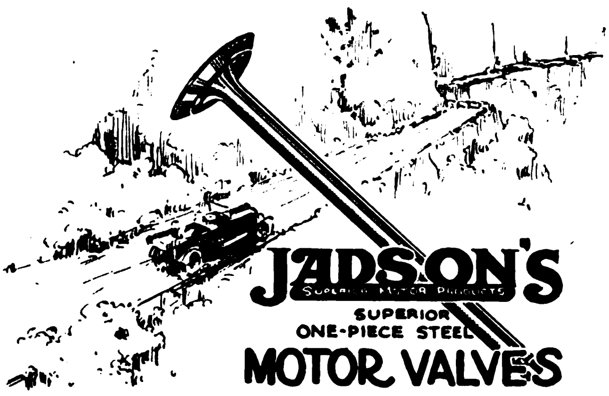
THOMASON UNIVERSAL WHEEL PULLER.

WALLER ALIGNING JIG.

In engine overhauling and repairing it is important that all connecting rods be tested before being replaced, as bent or twisted rods cause a knock or slap in the engine, with frequently a loss of the car owner's good will toward the garage management, which may have done all in its power to turn out a perfect job. The Waller connecting rod aligning jig is manufactured by Waller Mfg. Co., Oelwein, Ia., as a remedy. It is for use on any connecting rod in car, truck, or tractor. Rods are bent quickly to alignment right in jig, instead of being removed from the jig for handling in a separate vise. Bushings are used for different crankshaft sizes. The arbor supplied with jig is Ford size, and the bushings slip over this arbor. The jig sells at $12.50, and the bushings at $1 each.



WALLER ALIGNING JIG.



More Power to You *with JADSON Valves*

Greatest loss of power comes from inefficient valves. With Jadson's one-piece, hand-forged steel valves, guaranteed not to burn out, pit, scale, or warp, your car will keep its youth and pick-up, smoothing out the hills, giving greater speed and power.

Ask Your Dealer for Them

Manufactured by

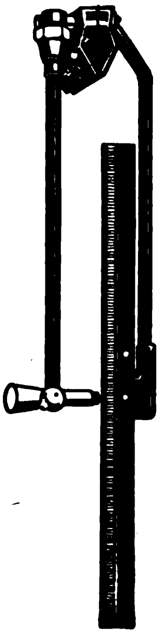
J. A. DRAKE & SONS, Reedley, Calif.

Sales Department: Allied Industries, Inc.

San Francisco Seattle Los Angeles

MALCO 3-in-1 WINDSHIELD CLEANER

A BIG MONEY MAKER



One model fits any car—open or closed.

Can be installed in three different ways—it clamps anywhere on the windshield frame or through a hole in the frame.

JOBBERS AND DEALERS

Write today for price lists, descriptive folders and information about our sales-helps.

Retail $1.50 U. S. A.

MALCO PRODUCTS CORPORATION

146 S. West Temple St. Salt Lake City, Utah

The Call of the Open Price

No dark secret price clouds at the Smith-Booth-Usher Co. Every Los Angeles and San Francisco stock tool is openly priced—

Priced Stock Bulletin No. 51

Money Making Machinery

just off the press contains over 1000 items of machinery and equipment--showing interesting Price Reductions.

14″x8′ Walcott Quick Change, Double Back Geared—Reduced from $975.00 to $657.00.

16″ Canedy-Otto No. 26, Round Base Upright Drill—Reduced from $128.00 to $115.00.

The Above Are Samples Only

SMITH-BOOTH-USHER CO.

SAN FRANCISCO
50-60 Fremont St.

LOS ANGELES
228 Central Ave.

USE
EMSCO
BRAKE LINING

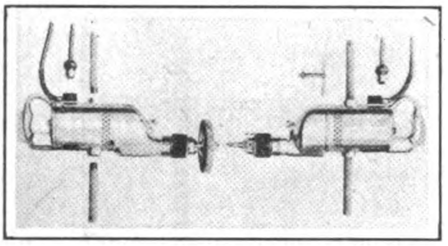
INSURANCE

in its greatest form and cheapest is to have your brakes lined with EMSCO Brake Lining. Money collected from insurance cannot compensate for pains from injury caused by accident. EMSCO ofttimes prevents the accident. Ask to have your brakes lined with EMSCO—it's dependable.

E. M. SMITH CO.
612-642 S. Clarence St.
Los Angeles, Calif.

WODACK DRILL-GRINDER.

The new Wodack combination portable electric drill and grinder is manufactured by Wodack Electric Tool Corp., 23-27 South Jefferson St., Chicago, to fill a long felt want in shops and factories, where hand drilling and grinding are performed, yet not enough of either to warrant purchase of two separate machines. It can be used for drilling holes in metal or wood, and with grinding wheel attachment will cover the average requirements for grinding. Drilling capacity is from ⅛ inch to ⅝ inch in steel. Used as a grinder it carries a 6 inch by ¾ inch grinding wheel. Two separate speeds are provided, slow for drilling, high for grinding. Complete weight of tool is but 18 pounds, while motor develops ½ h. p. under load. In addition, the switch in the top handle, of quick make-and-break automatic-stop type, insures the operator of having tool under control at all times. Aluminum castings and ball bearings are used throughout.

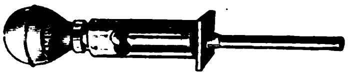


THE WODACK DRILL-GRINDER.

The tool is simple in construction, yet rugged to withstand hard service. The speed change is a simple operation, as is the operation of changing the grinding wheel attachment in place of drill bit, or vice versa. The entire tool is built in the Wodack factory, including electric motor, and in addition to the regular guarantee of one year against electrical or mechanical defects, the maker will rewind motor once free of charge should it burn out.

AMBU BATTERY TESTER.

The Ambu battery tester is a hydrometer in which three colored balls—white, green and red—floating or sinking in the solution drawn from the battery, show the battery's condition. If the white ball sinks when hydrometer is filled, the battery is not fully charged, but will perform satisfactorily; if green ball sinks, battery is nearly exhausted; if red ball sinks, battery is completely exhausted. It is claimed the Ambu tester has so few parts that there is nothing to get out of order and it will last for years. The glass is protected from breaking by the bulb and rubber ring, and tester may be carried in the car owner's tool box. Manufactured by American Bureau of Engineering, Inc., Battery Appliance Division, 2632 Prairie Ave., Chicago. Price 75 cents.



AMBU BATTERY TESTER.

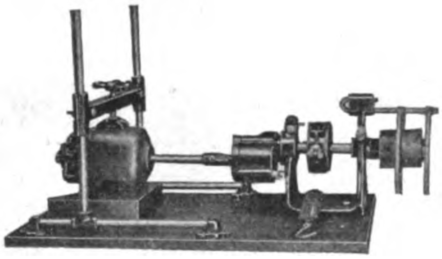
THOMASON BEARING REAMER.

With the new Thomason bearing reamer there is no hand scraping of connecting rod bearings, consuming from two to three hours a bearing, and an inexperienced helper can make a perfect job in 15 minutes, it is claimed. Any mn who can hand scrape a bearing so quickly will easily be worth $10 a day or more.

The main principle is a cutting edge projecting 1/1000 inch from a sleeve mounted on a mandril. Different size sleeves take care of various size bearings, but tool and sleeves are constructed so set of blade is right for every sleeve without adjustment. In fact, although blade is adjustable, it is adjusted only to take care of wear and sharpening of blades. There are no high or low spots in the finished bearing, but the surface is left smooth as glass. Manufactured by Shepard-Thomason Co., Los Angeles.

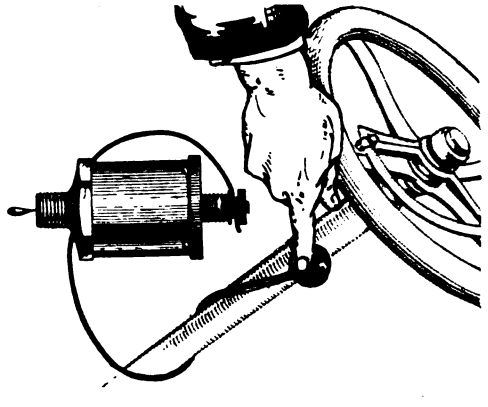
RELIANCE TEST UNIT.

A practical and low-priced machine for testing starters, generators and magnetos has been perfected by Reliance Battery Products Co., 2288 South 8th St., Council Bluffs, Ia. Using it, the repair man can test and repair without having to install it in the car. The chief features are low price, simple construction and general adaptability to the average shop needs. A special feature is that Ford f. a. generators mesh directly into the drive and can be turned at any angle while under test, so adjustments can be made without removing generator from the test unit.



RELIANCE TEST UNIT.

A good test for faulty spark plugs is to change to another cylinder and see if the miss follows the plug.



The picture indicates how, by pushing a button on the steering column, a small electric oil pump is started and lubricates every part of the chassis. Surely an easy, not to say luxurious oiling method; and McClure Electric Oil System, 871 O'Farrell St., San Francisco, guarantees the product unconditionally. A detailed description of the idea appeared in the May 15 issue, at which time the cut for the illustration had not arrived. For average city driving, push the button every other day; on lengthy touring trips, every 150 or 200 miles.

CAMCO PUMP FOR FORDS.

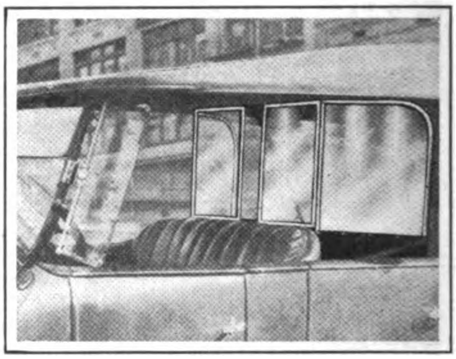
The Camco turbine pump for Ford cars and trucks has been put on the market as a reliable means of preventing engine overheating, by constant circulation of the 3 gallons of water carried in the Ford radiator, which otherwise often is insufficient. The Camco drives direct off the regular fan belt, and circulation does not stop if belt loosens or breaks. It is installed in a few minutes, with simple wrench and screw driver and removal only of water pipe and lower radiator connection.

CAMCO PUMP FOR FORDS.

A powerful turbine, driven by fan belt, operated over a 2½ inch flange drive pulley, is the main feature. The turbine rotor rides on special phosphor bronze bearings, one at each end, both self-adjusting and self-lubricating. Non-leaking stuffing box allows easy rotation of turbine rotor and prevents undue pull on fan belt. Manufactured by C-A-M Corp., 2006 Central St., Kansas City, Mo.

MILLER TONNEAU SHIELDS.

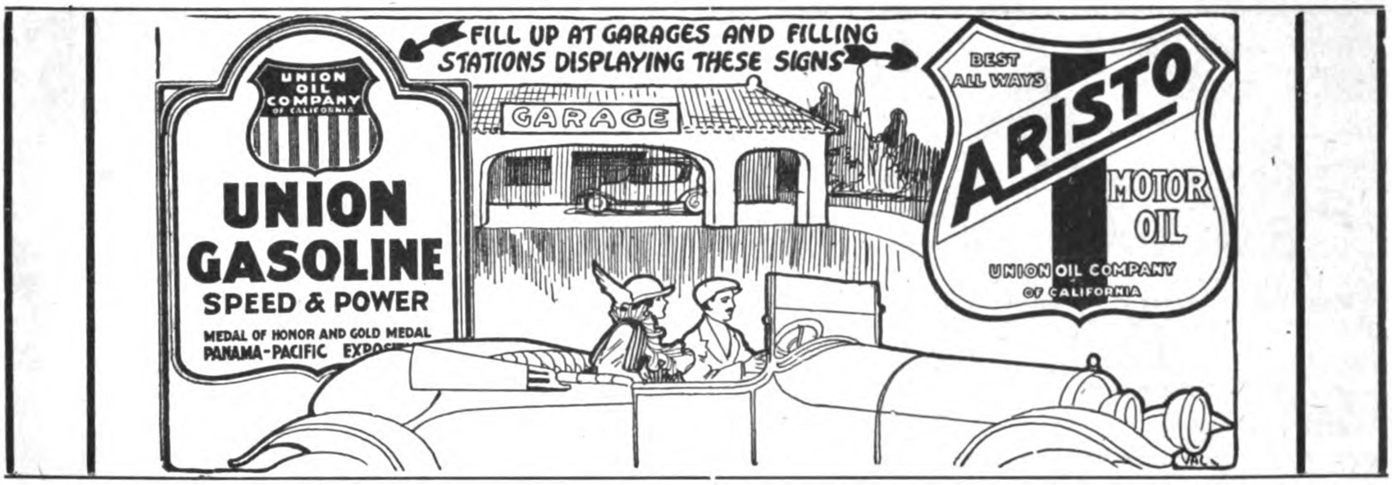
Miller tonneau windshields are manufactured by Clyde L. Miller & Co., 1544 Cahuenga Ave., Los Angeles, and already are in use upon thousands of cars. They are made of high quality glass, set in a heavy nickel plated or baked enamel frame. The side wings are held against the wind by the smoothest acting friction joints possible to incorporate into a windshield, according to Clyde L. Miller, manager. These wings fold out of the way when not in use. Extra heavy curtains prevent the wind from blowing under them. They may be installed in 30 minutes without removing upholstering, will fit any make of car, and are priced at $20 complete.



MILLER TONNEAU WINDSHIELD.

The company is manufacturing also Miller glass rear curtain lights for Ford cars. These are placed in the present openings without removing curtain, and are held secure by two baked enamel plates that clamp together on each side of curtain. Price $2 a set.

America produces and uses 4½ gallons of gasoline for each bushel of wheat it produces. Consumption of "gas" is 48 gallons per capita.


FILL UP AT GARAGES AND FILLING STATIONS DISPLAYING THESE SIGNS
UNION OIL COMPANY OF CALIFORNIA
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BEST ALL WAYS
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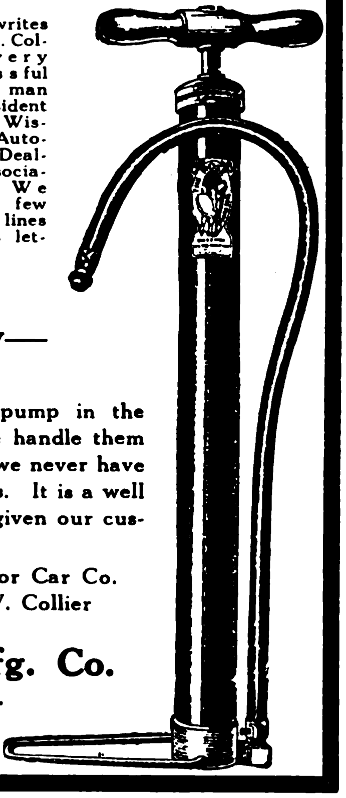
MOTOR OIL
UNION OIL COMPANY OF CALIFORNIA
VAL



"WE HANDLE ROSE PUMPS EXCLUSIVELY"

Thus writes Mr. C. W. Collier, a very successful business man and president of the Wisconsin Automobile Dealers' Association. We quote a few pointed lines from his letter:—

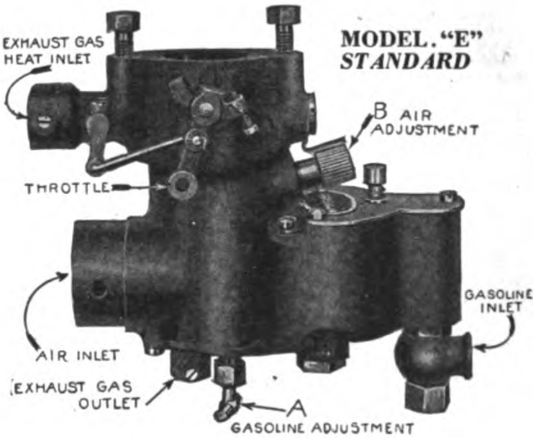
And This Is Why—

Gentlemen:—

We know of no better pump in the country than the Rose. We handle them exclusively, mainly because we never have any trouble with adjustments. It is a well built pump and has always given our customers entire satisfaction.

Fox River Motor Car Co.
(Signed) C. W. Collier

Frank Rose Mfg. Co.
Hastings, Nebr.


EXHAUST GAS HEAT INLET
MODEL "E" STANDARD
B AIR ADJUSTMENT
THROTTLE
GASOLINE INLET
AIR INLET
EXHAUST GAS OUTLET
A
GASOLINE ADJUSTMENT

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GIVE
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AUTHORIZED VALVE-IN-HEAD Buick MOTOR CARS SERVICE

A Complete Line of Sixes and Fours for 1922

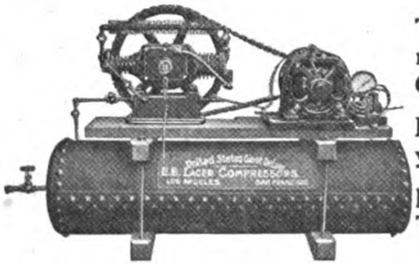
When Better Automobiles Are Built Buick Will Build Them

BUICK

Ordinary Plug
Two Plug Ignition
SU-DIG Plug
To mag. or battery system
MORE POWER
GREATER MILEAGE

DO YOU UNDERSTAND TWO PLUG IGNITION—the system that ignites the gas at two opposed points at once? This burns the mixture completely and almost instantly; increases power and gasoline mileage; saves fuel and lessens carbon accumulation and spark manipulation. SU-DIG Series Spark Plugs added to the plugs now in your engine, give Two Plug Ignition. A wonderful improvement in the running of your car. No change in present system required. Write for booklet, "How to Get More Power." If your dealer does not handle SU-DIG Series Plugs, write Chanslor & Lyon Co., S. F., L. A., Fresno, Oakland, Seattle, Portland. McCoy Motor Supply Co., San Francisco, Los Angeles, Superior Motor Power Co., 77-A Spring St., N. Y.

SU-DIG



The same reliable U. S. Compressors.

Reliable 10 years ago.

More reliable Today.

Many copies appear in the market but only one original.
The best with patented features

E. B. LACER

Air Compressors
Los Angeles
1224 East 8th St.

Electric Motors
San Francisco, Cal.
401 Van Ness Ave.

SMOOTH-ON IRON CEMENTS

No More Expensive Repair Bills

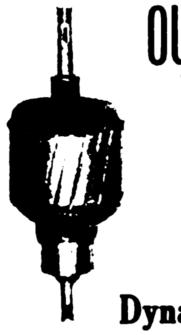
SMOOTH-ON for Leaky Radiators

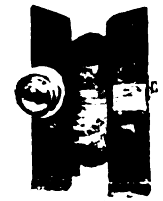
With Smooth-On Iron Cement No. 1, you can repair leaks in radiators, radiator edges, etc., both on honeycomb and tubular types, from the outside, without removing the radiator, at a few cents' cost.

Write for booklet, "How to Repair Motor Radiators"—it will show you how to make radiator repairs and other repairs around cars easily, quickly, and economically—it's FREE. Smooth-On comes in 6-ounce, 1-pound, and 5-pound tins. Also in larger sizes.

Dealer: Write for particulars on this live proposition.

SMOOTH-ON MFG. CO.
Dept. 37-E Jersey City, N. J. U.S.A.





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OUR
Percentage of "Come-Backs" is less than 3%.
Exchange service is of 95% efficiency.
Stock is the largest of its kind in the world.
Workmanship and materials cannot be excelled.

We Rewind AND REBUILD Armatures
For Automobile Starters and Generators

2-Year Guarantee

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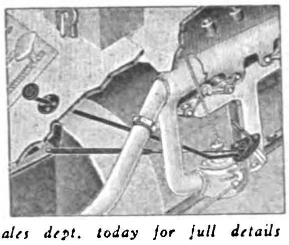
2315-17 S. Grand Los Angeles, California

Armature Tester
Ten Dollars Net



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The EWALD
FOOT ACCELERATOR FOR FORD CARS

Leaves the driver's hands free to operate the wheel, brakes and horn, allowing him to control the speed of his car entirely with the foot.

It operates independent of the hand throttle and its action is unaffected by road jolts and jars.

Dealers and Jobbers—Write our sales dept. today for full details

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Price 75c

Sales Dept.
THE ZINKE CO.
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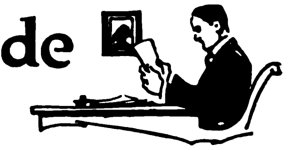
Chicago, Illinois

Western Trade Notes



Seattle, Wash.—General Tire & Rubber Co., General tire distributor, has been changed in name to Sutherland Co. Inc.—McAlpin-Schreiner Co., 1520 10th Ave., has succeeded Motor Products So. at same address.

Tacoma, Wash.—Buckley Garage has been bought by Harold Phelps and Fred McHugh from Ross Robertson and T. T. Riggs.

Hoquiam, Wash.—Hoquiam Motor Co. is having a $25,000 garage built for it at J and 7th Sts.

Carvallis, Ore.—Wilbur Browning has bought the interests of Leo Hill and Dick Johns in Universal Garage.

Salem, Ore.—Lee L. Gilbert has taken the Hupmobile agency for the county.

The Dalles, Ore.—Gannett Motor Co. has leased a fine new brick garage, to be built beside Johnston & Son Garage.

Roseburg, Ore.—Ernest Kelly has opened Motor Inn Garage, 521 N. Jackson St.

Yreka, Cal.—Electric Supply Co., E. G. Millbourn manager, has opened on Miner St., carrying automotive electrical equipment.

Ferndale, Cal.—R. R. Williams has opened in Berding Bldg. with the Overland, Willys-Knight, Oldsmobile and Jordan agencies.

Etna Mills, Cal.—Leslie R. Oliver has bought the interest of F. D. Andrews, his partner, in Etna Mills Garage, and is now sole owner.

Red Bluff, Cal.—Red Bluff Auto Racing Assn., formed by Howard Coffman, M. D. Kavanaugh, Robert Garrett, H. D. Jerrett, will hold three automobile races on the rodeo track here, June 17, with a $1000 purse.

Chico, Cal.—Joseph Atrigel and W. A. Wyatt have bought Brandenburg & Co. Accessory Store, on Broadway from Roy McCabe.

Healdsburg, Cal.—R. A. Schieffer Garage & Ford Agency has been bought by J. O. Anderson for $30,000.

Lakeport, Cal.—Bill Adams, Dodge Brothers dealer, has leased a new building being erected on Main St.—Fraser's Garage is having a new garage built for it on Main St. with 6000 square feet floor space.

Arcata, Cal.—Charles Shortridge and his son Paul have opened a repair shop and automobile repainting business on I St.

Sonoma, Cal.—Mission Garage & Electric Supply Co. is now owned entirely by George Leiser, who has bought Philip Leiser's interest.

Rio Vista, Cal.—J. B. Johnson has become Dodge Brothers car dealer here.—J. Stern & Co. has taken the Durant agency.

Santa Rosa, Cal.—H. S. Gutermute, located in Walden Garage, has taken the Nash car and truck agency.—Caselli Brothers Garage, and Joe Thomas Chandler-Cleveland Agency, have leased joint quarters in a new garage with 6000 square feet on 5th St.

Petaluma, Cal.—J. H. Madison Jr. has taken the Earl car agency.—Walter Glazier has opened Glazier's Garage on San Rafael Road.

San Rafael, Cal.—W. F. Gasper Garage has been sold by Gasper to L. Grault and E. Gioja.

Napa, Cal.—Carbone-Dickel Co. has taken the Durant agency for Napa County.

Roseville, Cal.—Placer County Auto Co. has leased its garage department to W. H. Luck and E. H. Horton, to operate as Superior Garage.

Placerville, Cal.—O. N. Hirst Garage has been moved into its fine new brick building on Main St.

Stockton, Cal.—Triangle Parts Co., San Francisco, has opened a branch here, 214 E. Miner Ave., George G. Shaw manager.

Oakdale, Cal.—Warren Watson has opened Watson's Garage on Main St. here.

Hollister, Cal.—Sweet Service Co., J. S. Peixotto manager, has opened an accessory store, 252 Main St.—Carey Auto Sales Co., former Chandler and Cleveland agency, is now dealer for Nash, Hupmobile and Overland cars, on 4th St.—B & B Garage has been opened on 4th St. by Henry H. Beden and John Baffico.

Watsonville, Cal.—F. L. Layman, former manager of Standard Tire Sales Co., Oakland, has become manager of the branch here of California Auto Supply Co.—Stuart & Broderick, 534 Main St., have taken the Overland and Willys-Knight agencies.—Franich Brothers have reopened Inside Garage on East Lake Ave.

Los Gatos, Cal.—H. J. Stanley has bought Los Gatos Garage, Ford and Fordson agency.

BALL BEARINGS REGROUND

Immediate exchange on all sizes and types.

Distributors Hess-Bright New Bearings.

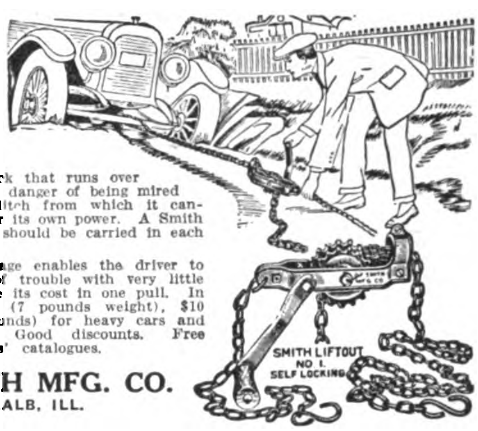
Ahlberg Bearing Company
1708 S. Grand
Los Angeles, Cal.
Portland San Francisco

THE SMITH LIFT OUT Car Puller

Every car and truck that runs over country roads is in danger of being mired or going into a ditch from which it cannot pull itself under its own power. A Smith Liftout Car Puller should be carried in each such car or truck.

Its enormous leverage enables the driver to pull his car out of trouble with very little effort. It will save its cost in one pull. In two sizes: No. 1 (7 pounds weight), $10 list; No. 2 (7 pounds) for heavy cars and trucks $20 list. Good discounts. Free electros for jobbers' catalogues.

C. F. SMITH MFG. CO.
DE KALB, ILL.



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"Never Jar Loose"

SPECIFY ON UPKEEP AND NEW EQUIPMENT

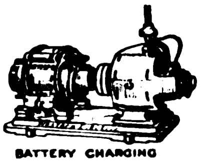
USED BY BEST MANUFACTURERS

WRITE FOR SAMPLE

DRAKE LOCK-NUT CO.
PLANTS: CLEVELAND SAN FRANCISCO

BETERBILT BATTERIES

There is a big demand for this efficient, low priced battery. We can make dealers an interesting proposition. Write for details.



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Distributors for Delco, Klaxon, Remy and Black & Decker products. Rewinding, Starting, Lighting and Ignition Experts. Batteries Re-charged. Manufacturers of Radio Equipment.

H. N. LANDON ELECTRIC CO.
"Everything Electrical"
306 W. Pico St. Phone 641-15. Los Angeles, Calif.

SINGER PROCESS PISTON PINS

We Carry a Larger Stock of Pins than Any Exclusive Piston Pin Manufacturer in the United States

We Manufacture Piston Pins for all Makes Automobiles, Trucks and Tractors

Unequaled for quality. 200,000 in stock, ready for shipment to any point. Full particulars, prices and discounts mailed on request.

JOE SINGER MACHINE WORKS
2116 So. Los Angeles St. Los Angeles, Calif.

A Rapid Selling Accessory For Every Make of Car

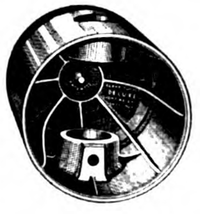
Reliable Spring Oilers completely cover and lubricate springs. Keep out dust, water, mud, and rust. Bring greater riding comfort, increase tire mileage, add to life of car, stop squeaks, prevent crystallization. Fit all makes and models.

DISTRIBUTORS WANTED

A few territories still open for exclusive Distributors. Unusual opportunity for profit. Only limited investment necessary.

Dealers — Easy sales plan offers quick profits. Write today.

Reliable Spring Oiler Company
205 Reliable Bldg.
32 E. Main St., Columbus, Ohio



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DELUXE
LIGHT WEIGHT CAST IRON PISTON
"The Successful Light Weight Piston" ©

See the reinforcing ribs running ACROSS THE HEAD to a reinforcing ring.

CLARK-TURNER PISTON CO.
Los Angeles, Cal.

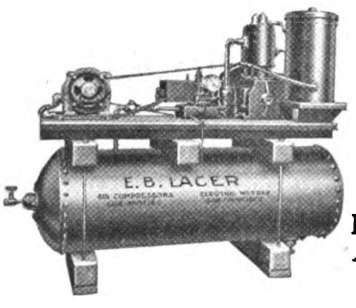
MORELAND MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST



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If it is Compressed Air 1 to 80 cu. ft. of air per min.

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Air Compressors Electric Motors

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Large stock of all standard sizes on hand for immediate exchange.

Special Bearings Made to Order

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Trade Mark Registered

TIMER FOR FORD CARS

There are no "ifs" and "ands" about the staying qualities of the Daleco. We guarantee it in writing to deliver perfect service for a period of 2 years and at 50 cents per year thereafter.

Write our sales department today for full details

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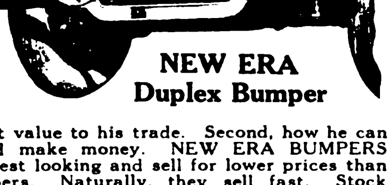

STOCK NEW ERAS You'll Get The Business

NEW ERA Duplex Bumper

The dealer in bumpers has two things to consider. First, howhe can give the best value to his trade. Second, how he can get fast turn-over and make money. NEW ERA BUMPERS are the strongest and best looking and sell for lower prices than most high-grade bumpers. Naturally, they sell fast. Stock them. They'll bring you the bulk of the bumper trade.

Write for Catalog

NEW ERA SPRING & SPECIALTY CO.

73 Cottage Grove Ave. Grand Rapids, Mich.

GRAF SALES CO., Williams Bldg., San Francisco, Calif.

Phillipsburg, Mont.—Otto McQuestien and Herman Lindstadt have moved their garage business into the old Phillipsburg Garage, having bought it from George Cornell.

Anaconda, Mont.—J. E. Keeley has opened Butte Tire Shop, 110 S. Montana St.—A new sales and garage building will be built for Silver Bow Auto Co. on South Montana St.

San Diego, Cal.—Pickford-Barker Tire Co. has taken the Hartford tire agency.

Hemet, Cal.—Theodore Vickers has moved his battery repair business to Rickard's Garage.

Fullerton, Cal.—J. J. Lilley Garage will have a brick garage, costing $21,700, built for it on West Wilshire Ave., with 14,000 square feet.

Orange, Cal.—Pashley Motor Co., Chevrolet dealer, and Crown Stage Depot, will each occupy half of a new $11,000 1-story building to be erected on West Chapman Ave.

Ontario, Cal.—The new Buick Garage on West A St., costing $11,000 and said to be the largest in San Bernardino County, has been opened by Charles Minton.

San Dimas, Cal.—J. S. McIntyre, Ford and Fordson dealer, has leased a fine new garage being built at Bonita and San Dimas Aves.

Covina, Cal.—George C. Semler has opened a battery shop in Merritt Garage on San Bernardino Road.

Alhambra, Cal.—William Frauenberger has been made Chevrolet dealer for Alhambra, San Gabriel and Monterey Park.—Auto Top Co. will have a new building built for it on Main near 5th St.

Pasadena, Cal.—Los Robles Garage, 114 Los Robles St., has bought the local branch of Kay & Burbank, Los Angeles, handling Exide batteries.—Adco Dry Storage Battery Co. has opened at 1026 E. Colorado St., J. Allen manager.—A. E. and Earl B. Plank have opened at Broadway and Union Sts., with the Jordan and Velie agencies.

Gardena, Cal.—R. W. Larson has sold his interest in Gardena Service Station to William Grieving and has opened an Exide battery station.

Orland, Cal.—C. A. Nock has bought Minton Garage on Colusa St. from E. O. Minton.

Yreka, Cal.—Karl F. Autenrieth has sold his interest in the Dodge Brothers Agency to his partners, S. S. Stiles and Paul R. Dolganfeld.

Vacaville, Cal.—Owen & Marlor's Ford Garage has built an addition 240 feet long, doubling its former floor area.

Redding, Cal.—Glover's Market St. Garage is being enlarged by an addition which will increase the frontage by 100 feet and cost $13,500.

Ontario, Cal.—A. A. Couch and H. H. Wolfe are now partners in the Chevrolet agency here.

Compton, Cal.—A. R. Sargent has bought National Garage.

Huntington Beach, Cal.—W. J. Elgar has taken the Studebaker agency.—May Motor Co., Santa Ana, Nash car dealer for Orange County, has opened a branch here, Sycamore and 2nd Sts.

Sandpoint, Ida.—V. C. Cochrane and L. G. Bartz have opened Sandpoint Tire & Battery Shop in Allen Block.

Boise, Ida.—Intermountain States Truckmen & Auto Carriers' Association has been formed here, to have Idaho headquarters at Pocatello; Ed. H. Peasley was elected to have charge of all committees, and Ray Trask, secretary.

Winnemucca, Nev.—L. L. Sowers and G. W. Reinhardt have taken over Sellers Garage on North Melarkey St.—Marvin Kennedy has opened a garage and repair shop in Wilkinson Block, Bridge and Second Sts.

Reno, Nev.—J. W. Leavitt & Co., San Francisco, Oldsmobile distributors, has made Frank G. Hood, their former Fresno manager, branch manager here.

Corona, Cal.—M. D. Shannon has taken the Chevrolet agency here.—Bruce Wallace has bought Six Bells Service Station on West 6th St. from M. T. Fallon.—Ford Garage has been bought by L. B. Harris and W. B. Bunch from R. W. Newton.

Santa Ana, Cal.—Liberty Garage, V. F. Stein manager, will arrange for erection of a new garage soon, at investment of $60,000.

San Bernardino, Cal.—Davidson & Yost, 446 D St., have taken the Paige and Jewett car agencies for San Bernardino and Riverside Counties.

Bell, Cal.—Bellwood Garage has been opened by H. Jackson and Don Berry.

Colton, Cal.—M. C. Walker of Pioneer Garage has bought Motor Service Co. and will occupy its former garage.—F. E. Wood has bought Willard Battery Station from G. H. Wright.

San Diego, Cal.—Luthy Battery Co., 744 7th St., headed by C. A. Edwards Jr., will handle Luthy batteries in San Diego County.—Lankford-Fetty Co., 1171 3rd St., has been Velie agent for the county.—M. H. McCrary and L. A. Shaffer have opened Main Garage on Newport Ave.

Prescott, Wash.—S. S. Marr & Son Garage has been changed in name to Prescott Motor Inn.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

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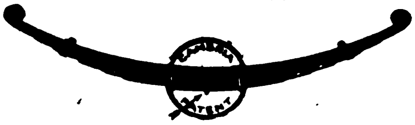
CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS



"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof

FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
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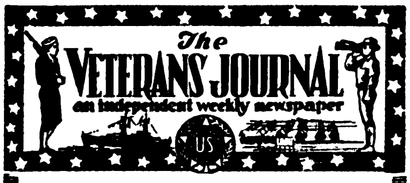

DEALERS, GARAGEMEN and EMPLOYEES

MANY of you are ex-service men—vitally interested in politics, politicians and public policy. The Veterans' Journal is an independent weekly news paper—we are not a part of nor do we represent any political faction or veterans' organization. We will at all times endeavor to discuss impartially all matters of public interest, especially to ex-service men and their friends along the entire Pacific Coast.

The subscription price, $2.00 per year, gives you fifty-two copies of the best Veterans' paper west of the Rockies (by veterans we mean those who fought in the late war, Spanish-American and Civil War).

Mail your $2.00 to-day—your paper will come to you promptly every week.

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BRONZE Machined to Size or Rough Castings
Impellers, Packing Nuts and Pump Shafts
Phillips Bronze Bushing Works
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MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

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JOBBERS and DISTRIBUTORS
Ask Us Why You Should Sell
Oil King Piston Rings
DYGERT & SIEMERS
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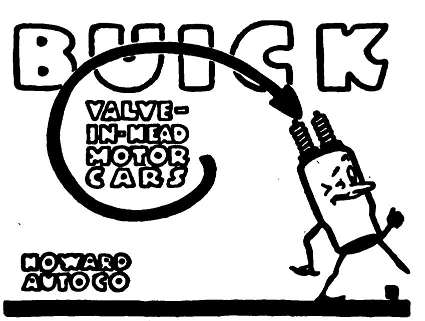
Complete Satisfaction Guaranteed above all other Oil Rings

AUTOMOBILES



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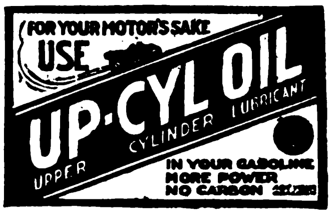
LUBRICATING OILS

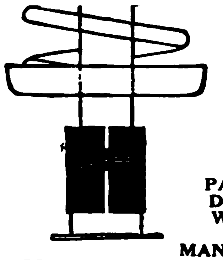
See Signature of C. C. Bogardus on Can
At Your Dealer's



For lubricating all upper parts of a motor, such as the valves, guides, valve stems, seats, cages, upper cylinder walls, and the sealing of the combustiton chamber with a fine film of oil by vaporization.
WEST COAST SUPPLY CO.
900 S. Grand Ave. Los Angeles

FORD VALVE ADJUSTERS

TOWNSAN VALVE ADJUSTER



Best little accessory ever put on a FORD
and the price is a trifle
Western Auto-Supply Company
PACIFIC COAST DISTRIBUTORS
Write for Open Territory
MANUFACTURED BY
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1024 Ramsey St. N. E. Minneapolis, Minn.

PISTON RINGS

THE RING THAT CURES oil burning motors after others have failed is the genuine and original Oil Kontrol piston ring made by Sunset Mfg Co., L. A. Look for the name, beware of imitations. Jobbers and Distributors write for territory
SUNSET MFG CO., 1328 E. 6th St., Los Angeles, Calif.

CYLINDER REGRINDING CYLINDER REGRINDING

B-N
Piston Pins
Give Greatest Service.
Made for hardest use.
Can't warp or crack.
Absolutely true sizes.
Jobbers everywhere.

See our adv. May 15 for List of Jobbers
BURGESS-NORTON MFG. CO.
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GENEVA ILLINOIS

Bankruptcy for Otis Friend.

Otis C. Friend, of Racine, Wis., well known in the industry, has filed a voluntary petition in bankruptcy as an individual in the Federal court at Milwaukee. Mr. Friend gives his liabilities as $288,364, and assets $50,000. He formerly was president of Mitchell Motor Car Co., and later became head of United Motors Accessories Corp. More recently he took over Olympian Motors Co., of Pontiac, which became Friend Motors Corp.

Of the liabilities, $238,597 is secured. The largest debt is a conditional one of $150,000. Mr. Friend states he endorsed a note in that sum given the Gotham National Bank of New York. The name of the payor is not given in the petition. The debt is secured by bonds of Olympian Corp. The assets of $50,000 consist of a loan made to Friend Motors Corp. of Pontiac.

The latter plant was bid in for $150,000 by the Gotham National Bank, at a mortgage foreclosure sale, May 2. The bank was the only bidder. The property was appraised recently at $450,000. The building formerly occupied by the Olympian Company had been used to manufacture the Carter car previously.

* * *

Webster Leaves Ford.

A. C. Webster, chief of the cold heading plant of Ford Motor Co., has resigned and has not announced his plans. Mr. Webster is generally credited with the successful development of the cold forging and heading process for working alloy and high carbon steel, and during his five years as head of this work for Ford he was responsible for many important developments.

* * *

Heads Spencer-Smith Sales.

W. M. Smith, general manager of Spencer-Smith Machine Co., Howell, Mich., announces appointment of J. E. Neale, formerly of Chicago, as sales manager. Mr. Neale is now arranging for nationwide distribution of Spencer-Smith pistons.

GOODYEAR TIRES ARE EASY TO SELL

METROPOLITAN AUTO PARK
METROPOLITAN GARAGE
METROPOLITAN

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

Photograph pictures Metropolitan roof parking space, where 70% of cars are Goodyear equipped

> ***"Of the 170 cars parked daily in the new Metropolitan Garage, approximately 70 per cent are equipped with Goodyear Tires. These cars are owned by the livest business men of Seattle, tenants of our office buildings. In opening our garage, a display of Goodyear Tires led off as the first big showing in the accessory shop. We are convinced that the Goodyear Tire is a business getter."***
>
> METROPOLITAN BUILDING COMPANY, Seattle, Wash.

Today, the demand for Goodyear Tires is widened and strengthened by the fact that Goodyear Tires are better, and cost less, than ever before. Dealers who recognize frequent turnover and satisfied customers as essentials of tire-selling success are concentrating their efforts on Goodyears.

For several reasons, Goodyear Tires are easy to sell. They are big, strong, and comfortable to ride on. More people ride on Goodyear Tires than on any other kind. The tough, long-wearing Goodyear Tread holds safely to any road.

Automobile dealers find that Goodyear Tires are of great assistance in car merchandising, for Goodyears contribute generously to the economy of operation every owner, and every prospective owner, is seeking.

If you want to be a Goodyear Dealer, and sell Goodyear Tires the Goodyear way, enjoying the constant assistance and counsel of Goodyear experts, write at once to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

QUALITY
SNAP RINGS
12-4½ .015 OVER SIZE X 5/16

QUALITY SNAP RINGS

"Cast to Last"

Easy to Install
Quick Seating
Long Lived
Accurate

QUALITY
—Standard equipment for America's foremost cars.

SERVICE
—Capacity 12,000 per hour. Over 2,500,000 rings, in 3,370 sizes, actually in stock. 24-hour shipping service.

PRICE
—List at 25 cents and up.

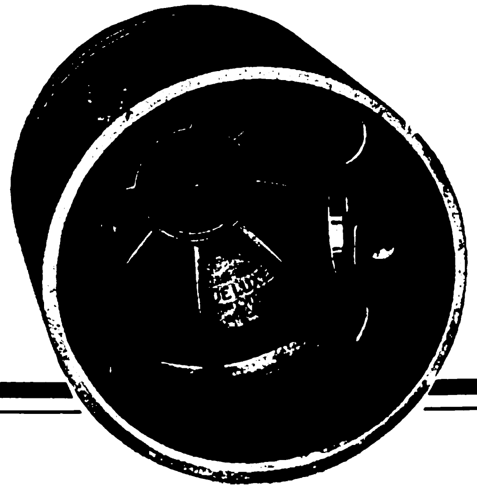
ASK YOUR JOBBER

"Cast to Last" book proves why there is a greater demand for Quality Piston Rings. Send for it today. It will help your business.

More Than a Million a Month

THE Piston RING COMPANY
MUSKEGON, MICH.

A piston you can install with confidence — knowing full well you have gained a satisfied customer.



Nearly a million DELUXE pistons have been sold — there's a satisfied customer to every set.

DELUXE Pistons Mean Increased Business

Every Sale a Boost Every time you install a set of DELUXE pistons you gain a steady customer. You not only gain his steady custom—he tells his friends about your place. (Word of mouth advertising is valuable.) He gains a wholesome respect for your judgment in the choice of replacement parts for motors. Ask him to check carefully the amount of gas and oil saved over his former consumption. He'll have that much more to talk about.

Patented Rib Construction In the patented rib construction lies the success of DELUXE pistons. Explain the DELUXE principle to your customers. Show them why 40% to 50% less metal can be used in DELUXE pistons and the product still be stronger than factory cast pistons, especially where strength is needed most. Tell of the saving in power where light weight pistons are used.

Closer Fitting DELUXE pistons have a greater heat radiating surface on the inside—thus they run cooler, which, with less metal, results in minimum expansion. Made of grey cast iron, the same as the cylinder block, they fit the cylinders closely. That eliminates piston slap and oil pumping.

A General Improvement Tell your prospect of the general improvement in the running condition of the DELUXE equipped motor, the greater speed, the reserve power that is available for long, hard pulls—how he will be able to accelerate faster and throttle down slower than ever before. Recite actual performance records of cars you know of that are equipped with DELUXE pistons.

It is worth a lot of sales argument to sell a man something you know he will like—that will make a permanent customer of him, and that he will tell his friends about.

DELUXE light weight cast iron pistons and core boxes for making the same are thoroughly protected by U. S. and foreign patents. We intend to vigorously prosecute all infringers.

DELUXE
LIGHT WEIGHT CAST IRON PISTON
"The Successful Light Weight Piston"

The name DELUXE is stamped inside the head of every DELUXE piston. Look for it. It is there for your protection.

DELUXE pistons are made in all sizes and oversizes for over 1400 makes of automobiles, trucks, tractors, motorcycles, aeroplanes, marine and stationary engines. You can get DELUXE in 24 hours or less. This eliminates holding jobs in your shop for long periods of time.

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Do You Want Pacific Coast Business?

IF You Want Jobbers

MOTOR WEST can put you in touch with Pacific Coast jobbers and manufacturers' representatives who have advised our Service Department that they are seeking territory on good automobile accessories, specialties and replacement parts.

IF You Want Territory

MOTOR WEST can put you in touch with manufacturers who are seeking Western representation on good automotive lines.

THIS SERVICE IS FREE

Write

SERVICE DEPARTMENT
Motor West Publishing Co.
Los Angeles, Calif.

Bridgeport No. 16

for all size tires

Cylinder

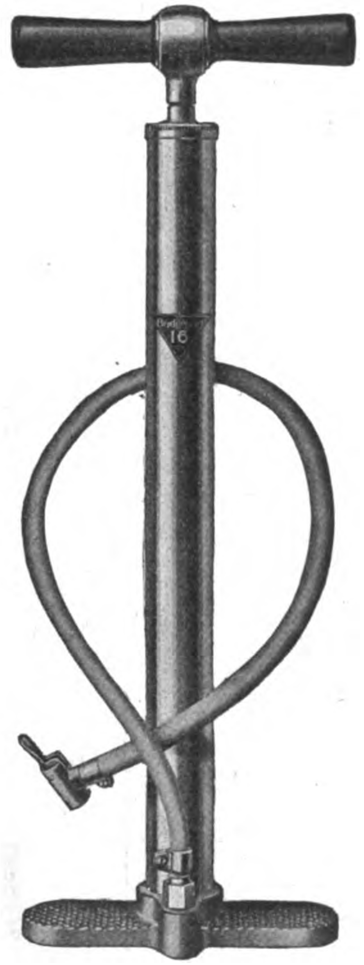
Seamless Drawn Brass will not rust. Perfectly finished inner surface insures smooth, easy operation of piston, and prevents excessive wear on leather bucket.

Piston

Equipped with patented bucket expander which automatically operates bucket under all conditions. High compression insured.

OtherFeatures

Leak-proof base connection
Check valve in base
Thumblock hose connection
Three ply long hose
Full grip handle



Easy Sales

because the superior features of the pump are obvious and quickly appreciated.

Appearance

clearly indicates the excellence of construction.

Performance

Superiority in construction details means better performance.

Guarantee

on material and workmanship protects you in your replacements.

List Price, $3.75

with liberal discount to the trade. Write for our sales proposition.

RUST-PROOF
LEAK-PROOF
Better-Built

Bridgeport Brass Company

Bridgeport 2315 **Connecticut**

FREE Sharpening SERVICE

Sioux Service Keeps Cutting Tools Sharp—No Charge

KEEN cutting edges and accurate angles are absolutely necessary in Valve Reseating Tools. We keep Sioux Cutting Tools in perfect condition for you, at no cost except the carrying charges both ways.

Our special department is equipped and maintained to give this service to users of Sioux Tools only. We do not sharpen other makes of tools.

All Sioux Tools sent us for this Free Service, will be resharpened and returned to you the same day that we receive them.

Take Advantage of This Free Service

WHEN your Sioux Valve Refacing Cutters or your Sioux Valve Seat Reamers get dull, send them direct to us and they will be resharpened at no cost to you. Do not send them through the jobbers, as this only delays the service.

Be sure tools are properly addressed and contain your name and address. Prepay the postage and include sufficient return postage. You need not write us if you are careful to include return postage and address it as follows: Albertson & Co., Resharpening Dept., Sioux City, Iowa. Be sure your name and address are on the package.

Demand Sioux Tools

SAFEGUARD your interests by demanding SIOUX TOOLS and profit by this exceptional Service.

Users of Sioux Tools find it profitable to keep on hand an extra set of Sioux Reamers and Sioux Valve Face Cutters so that one set can be resharpened while the other set is in use.

Remember Sioux Service is for the exclusive use of Sioux Tool Users

All Live Jobbers Sell Sioux Tools

ALBERTSON & CO. - - SIOUX CITY, IOWA

THE SIOUX WAY Trade Mark Reg. U.S. Pat Office

"Insures Bigger Profits Through Better Tools"

Angelus Tire Covers
Solly Sol
Down Pour

Tiffany - Steinway - Haviland

what do these names suggest to You?

Quality!—the one outstanding word in the business world that comes only after the test of time.

And now one more name is added to the list—"ANGELUS"—and it stands for the Tire Cover supreme. This is not a boast but a proven fact. Automobile accessory dealers who know quality and believe in giving their customers values sell the "ANGELUS."

"ANGELUS" Tire Covers are made after a new method—they fit the tire for which they are designed. No stretching and pulling to force a fit—they go on smooth and slick like a glove. They ward off the attacks of "Solly Sol" and "Down Pour"—the arch enemies of the spare tire.

Like all GOOD things "Angelus" Tire Covers sell for more than the ordinary article—they are worth more and they sell easier.

Motor Car and Tire dealers should see the improved "Angelus" lettering system—the application of crest, monogram or trade mark in exact colors as lasting as the cover itself—a permanent advertisement that the owner never discards. Write for samples.

Handle a quality article. It builds your business. Order "Angelus" Tire Covers from your jobber. Order them today. Be prepared for the rush of summer business.

the tire cover with the Drain Holes

Angelus Tire Covers

Manufactured by

PARKER & WATERMAN MFG. CO., Los Angeles
Makers of Tire Covers, Cushions, Automobile Trunks
Dealers Should Order Through Their Jobbers

New Way to *Extra* Profits

MAIL EXTRA PROFIT COUPON BELOW

YOU can add to your profit without additional selling expense. Sell Hayes Demountable at the Rim Wire Wheels.

Great changes are taking place—you cannot alter conditions—you *can* take advantage of them. People *are* and *will continue* to drive their cars *longer*. They are going to keep them running well and *looking* well. This opens up new markets to every man with an ounce of merchandising instinct.

Nothing so "dresses up" a car as wire wheels—nothing sells and stays sold like Hayes Wire Wheels. No wire wheels sell for so little nor with so much *profit for you*—and that is what concerns you most.

Hayes Wire Wheels have superiorities and advantages no other wire wheels possess. They are "Demountable at the rim." You do not sell five to an installation like the usual wire wheel, you sell only four wheels and a spare rim. You are offering a really successful wire wheel, made for Ford, Chevrolet, Earl, Durant, Nash, Dodge cars and other makes—immediately interchangeable with wood wheels—installed by an ordinary mechanic in five minutes.

Over half of America's motorized passenger traffic already rides on Hayes Wheels. Of all the cars produced 54% are Hayes equipped. The same immense resources which have made this achievement possible back up Hayes Demountable at the Rim Wire Wheels—back you when you sell them.

Look over the features of this wheel and you will see why you not only make more *sales* with Hayes Wire Wheels but *render an actual service* to the motorist every time you make a sale. Get our complete literature and sales plan. Mail the coupon today—or wire us to be sure you will be the first in your community.

Six Strong Selling Points

1. One-piece steel felloe, of channel steel, well adapted for assembly of the wire spokes and gives perfect support to the rim.
2. Rim supported front and back by in-rolled bead, excludes dirt. Provides ideal attachment for lugs.
3. Tapered nuts fit countersunk holes in lugs and act as lock-nuts.
4. Lugs are made from mill-rolled bars. Riveting portion integral with lug. No castings used.
5. Demountable rim lugs permanently attached to rim, eliminating driving studs.
6. Integral hub makes wheel interchangeable with wood wheel.

HAYES WHEEL COMPANY *of New York* **JACKSON, MICHIGAN**

Branches: New York Chicago San Francisco Indianapolis

Stocks Carried in Principal Cities

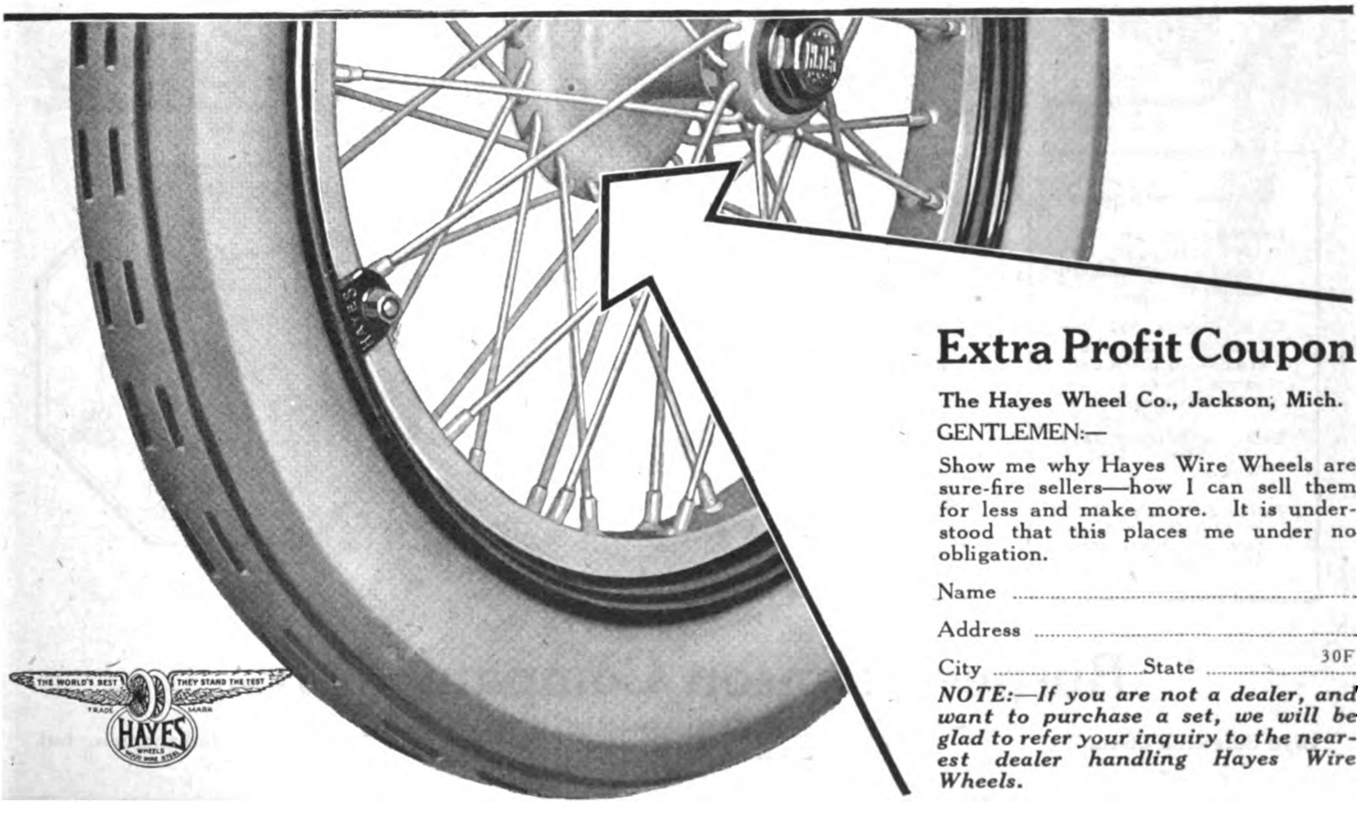
DISTRIBUTORS FOR WESTERN COAST

Bennett-Torney Co., 1128 S. Los Angeles St., Los Angeles

McAlpine-Schreiner, 1520 Tenth Ave., Seattle

Marshall-Wells, Ltd., Vancouver, B. C.

HAYES DEMOUNTABLE AT THE RIM WIRE WHEELS



Extra Profit Coupon

The Hayes Wheel Co., Jackson, Mich.

GENTLEMEN:—

Show me why Hayes Wire Wheels are sure-fire sellers—how I can sell them for less and make more. It is understood that this places me under no obligation.

Name ....

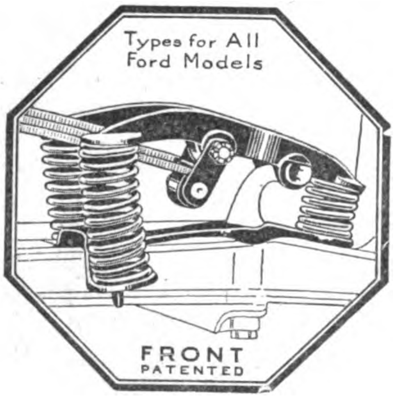
Address ....

City ....State ....

30F

NOTE:—If you are not a dealer, and want to purchase a set, we will be glad to refer your inquiry to the nearest dealer handling Hayes Wire Wheels.

BURPEE-JOHNSON
PATENTED
FloatAforD
SHOCK ABSORBERS



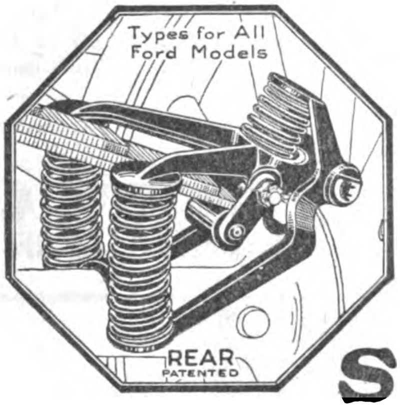
The "third" spring makes them superior to all others

You get riding comfort with FloatAforDs. The "third" spring —an exclusive feature—absorbs all the rebounds and holds the car steady without the annoying sidesway. The heavy down thrusts are cushioned by the two coil springs. The "third" spring makes FloatAforDs work both ways for easier riding.

FloatAforDs do not bind or clamp the Ford springs in any way. They work in full harmony with them. The body of the car is not raised out of its normal position when FloatAforDs are installed.

Continued use shows decided saving in tire, fuel and depreciation costs. We positively guarantee against spring breakage. Burpee-Johnson FloatAforDs are low priced. The open and closed models cost the same.

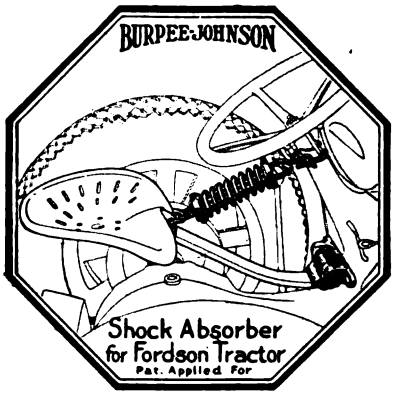
Try a set at our risk. Dealers will refund your money if you are not entirely satisfied after using them ten days. Types for Ford cars and trucks. Investigate FloatAforDs. There is a dealer near you.



Fordson Tractor
SHOCK ABSORBER

This wonderful accessory made for the Fordson seat gives added comfort to the driver and insures a greater day's work from the tractor. The bumps and jars from the rough ground in fields or on highways are absorbed and the driver remains at the wheel.

The spring is quickly and easily attached as there are no holes to drill. The added comfort means much to the driver in saving his physical strength. Made from high-grade materials, fully guaranteed. See this at your Fordson dealer, today. Write these distributors for literature.



Western Distributors

General Service Co.,
1500 S. Hope St., Los Angeles, — Southern California.

C. M. George, 357 Van Ness Ave., San Francisco,—Northern California, Nevada, Hawaiian Islands.

Ballou & Wright, 1515 12th Street, Seattle, Wash.

Ballou & Wright, 89-95 N. 10th St., Portland, Ore. — Washington and Oregon.

Write these distributors for territory. Big profits. Quick sales

Burpee-Johnson Company, Mfrs.

1918 Singleton Street
Canadian Office and Factory: Automotive Products Co., Ltd.
510 King St., East Toronto
Indianapolis, Ind.

AUBURN
Beauty-SIX

What are you in business for? (Answer it yourself) .... Would you like an opportunity to make MORE money? If you are alert to a real opportunity you should at least KNOW about an unusual proposition such as the one Auburn offers. It will pay you to get the facts. Write today.

AUBURN AUTOMOBILE COMPANY
Auburn, Indiana

FISK
TIRES
Trade Mark Reg U.S. Pat Off.
Time to Re-tire?
(Buy Fisk)

Helping Fisk Dealers to Make a Profit

The best way for any tire dealer to make a profit is to carry the right quality of tires, priced so as to attract trade and give him a profit on every sale.

That description exactly fits the Fisk line this year.

The quality of the tires is so plainly apparent that in our national advertising we invite the motoring public to compare Fisk Tires with ANY and ALL other tires they know.

When a buyer sees that a Fisk is bigger, better-looking and stronger than its competition, and finds that it costs no more,—often less—it does not require any sharp salesmanship to make a sale. Everybody wants a little more for his money—and any intending buyer can see that Fisk Tires give more.

That is true throughout the line—on Cords, on the Non-Skid, Red-Top, and the new Premier Tread.

This last tire enables dealers to get the business of buyers of small sizes who want a price. It has a distinctive tread, deeply cut and safe, and is a Fisk product as much as any other tire we make.

It rounds out our line—enables our dealers to step away from competition—get a greater volume, a bigger turnover — and consequently a surer profit on their year's work.

Further information on the Fisk dealer plan will be sent you on request.

There's a Fisk Tire of extra value in every size
for car, truck, or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.

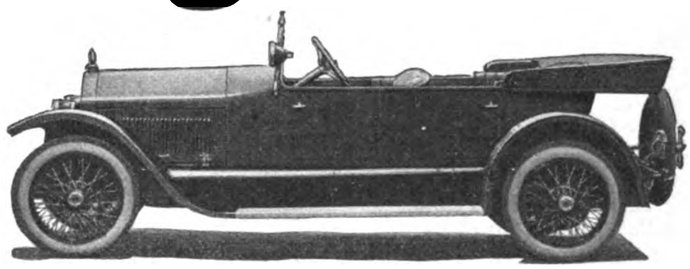
EASY

Starting
Gear Shifting
Clutch Action

Steering
Braking
Acceleration

Selling
Servicing
Reselling

Riding Comfort



Whatever your standard of easy riding comfort may be, you will find that the "D-H" motored Stutz with its Compensating Spring Suspension exceeds every expectation.

Every factor in driving is tuned to the slightest touch. Such gratifying ease of handling and riding has never been surpassed.

Added to the wonderful flexibility, the wide range of speed, the unquenchable power and vibrationless silence of the "D-H" motored Stutz, this new ease of riding and driving makes of it a car that answers every requirement of men and women who are satisfied only with superlative performance ability.

There is a definite clientele in your community who want a car like the "D-H" motored Stutz. No American-built car can be said to "pick" its patrons so unmistakably.

There is profit in a Stutz franchise at this time—possibilities for building up a business that will *repeat* and grow from year to year. You can add Stutz prestige to your business. Write, wire.

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

STUTZ

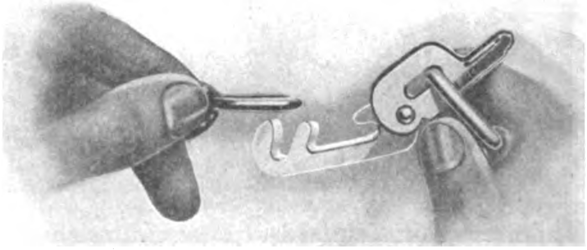
WITH THE "D-H" ENGINE AND COMPENSATING SPRINGS

"These Chains set the Pace in the chain business"

So said a prominent jobber after he had thoroughly analyzed and tested the remarkable improvements in chain making which he found in

OFF'N'ON CHAINS

He had in mind particularly these two quick-selling features:

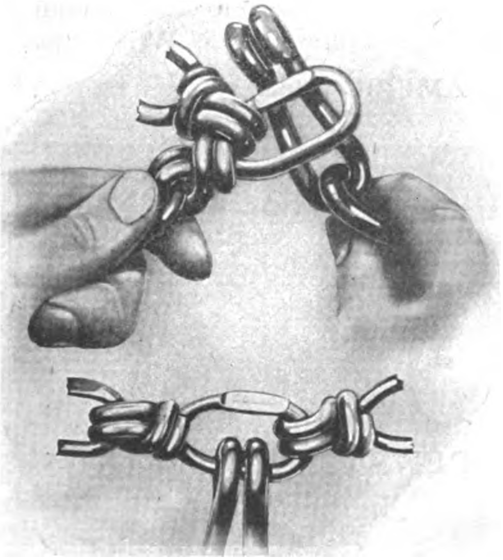


The Positive Lock

The patented lever lock, shown at right, makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No more lost chains—no more loose chains.

The Slip-On Link

The patented slip-on link, shown below, makes it easy to take off worn-out cross chains and put on new ones. A child can do it. And yet these chains cost no more than others.



Orders for fall delivery should be placed early in order to allow the jobber to estimate his requirements and protect his dealers. Order additional cross-chains, for you can always sell an extra set with every chain.

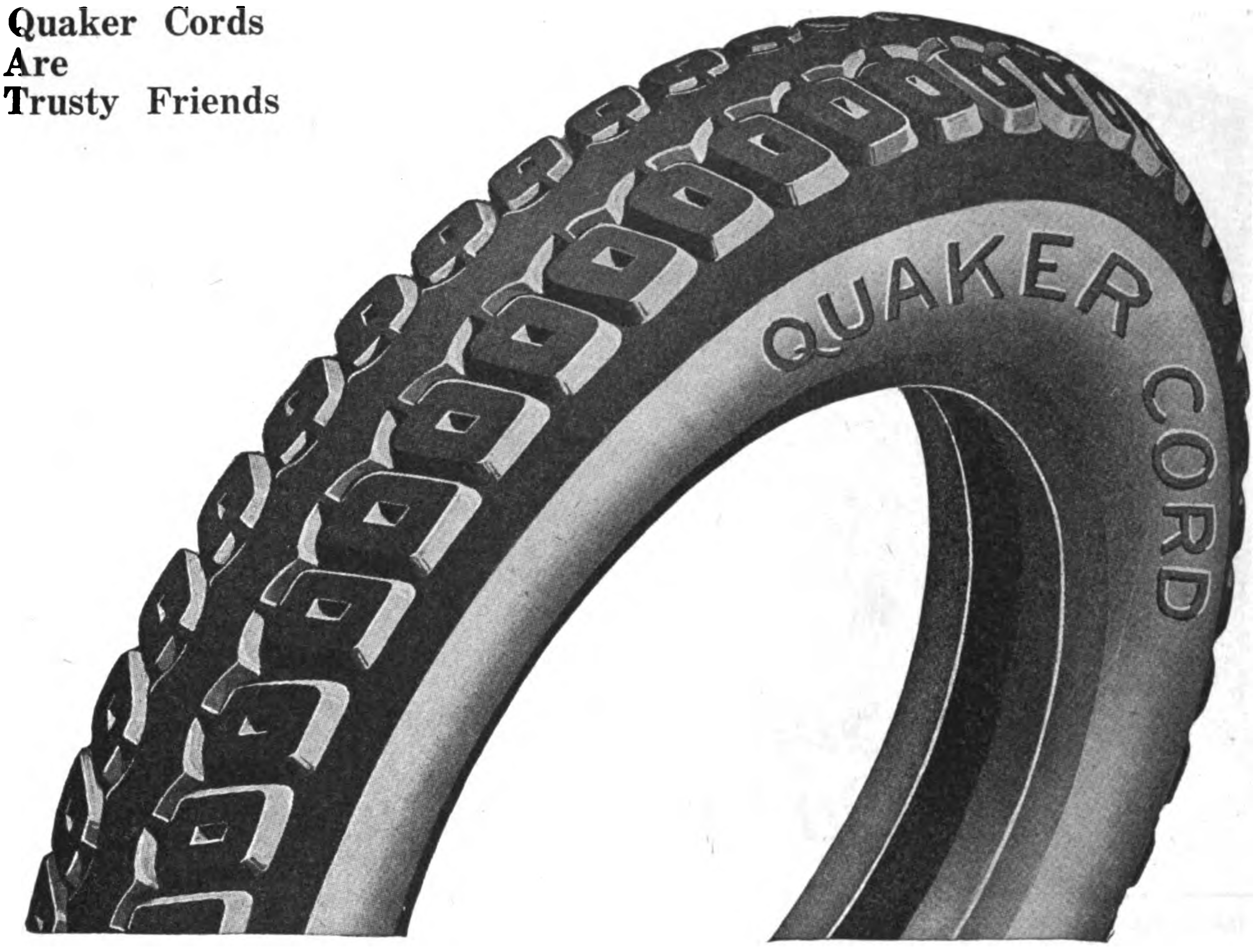
Write us for additional information, giving the name of your jobber

PYRENE MANUFACTURING COMPANY
Makers of Pyrene Fire Extinguishers
520 Belmont Avenue, Newark, N. J.

Branches:

CHICAGO	ATLANTA	KANSAS CITY	SAN FRANCISCO
17 So. Jefferson Street	24 Nassau Street	1712 Grand Avenue	977 Mission Street

Quaker Cords
Are
Trusty Friends



You will find the Mileage back of the name

THOUSANDS of Quaker users have proved it, and thousands more, from Coast to Coast, are now learning what savings in trouble and expense, Quaker Cords are giving them.

Our dealers are growing enthusiastic—not alone as to the results these tires are yielding, but particularly because of the constantly increasing demand.

If there is no Quaker dealer in your immediate locality, write for our selling proposition at once.

QUAKER CITY RUBBER COMPANY

Established 1885 **Factories—Philadelphia**

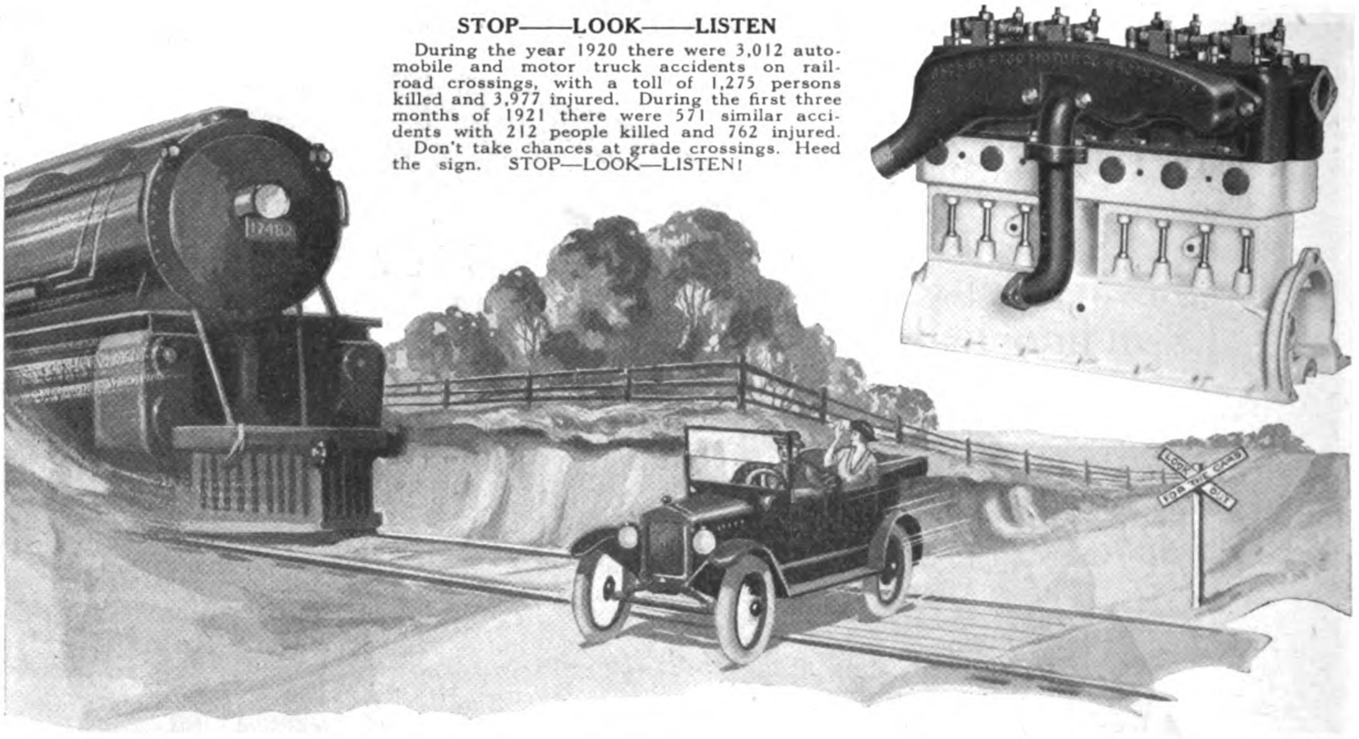
Philadelphia
624-26-28 Market St.

Chicago
217-221 W. Huron St.

Pittsburgh
211 Wood St.

New York
53 Murray St.

Pacific Coast Office, 304 Williams Building, San Francisco



STOP——LOOK——LISTEN

During the year 1920 there were 3,012 automobile and motor truck accidents on railroad crossings, with a toll of 1,275 persons killed and 3,977 injured. During the first three months of 1921 there were 571 similar accidents with 212 people killed and 762 injured. Don't take chances at grade crossings. Heed the sign. STOP—LOOK—LISTEN!

When Safety Depends On Snappy Pick-Up!

An unexpected railroad crossing hidden by trees, a bend in the road, or a high bank. You slow down as quickly as possible to ease the jar of bumping over the tracks—and just as you run onto the crossing you discover a train bearing down on you at 60 miles an hour—almost on top of you. If you open your throttle wide you may stall your engine. If you don't, you are lost—unless your Ford has the responsive, flexible acceleration that only a RAJO Valve-in-Head can give.

From 5 to 40 miles in 14 seconds flat!—that is the snappy pick-up developed by the famous RAJO Valve-in-Head. It may spell the difference between disaster and safety for you many times, in different ways. Your insurance will not save you from accident. A RAJO Valve-in-Head **may.**

This specially designed head adds from 8 to 14 H. P. to the capacity of a Ford engine, gives a mileage of from 25 to 35 miles to a gallon of gasoline, and makes possible speeds of from 5 to 55 miles an hour in high gear without changing the gear ratio. And it can be easily attached to any Ford car.

Order your Rajo Valve-in-Head today. The price is only $57.50—and the RAJO adds much more than that amount to the sales value of your car.

WESTERN AUTO SUPPLY CO., Los Angeles, Cal.
Distributors West of Denver

RAJO OIL GAUGE

A well oiled engine is another essential to snappy pick-up in emergencies. Keep your crank case well filled with good oil both as a safety precaution and a motor protection. A Rajo Oil Gauge will tell you instantly, at all times, just how much oil you have in your crank case. Just lift the hood and read the re-tipped wire. Easily installed, nothing to get out of order.

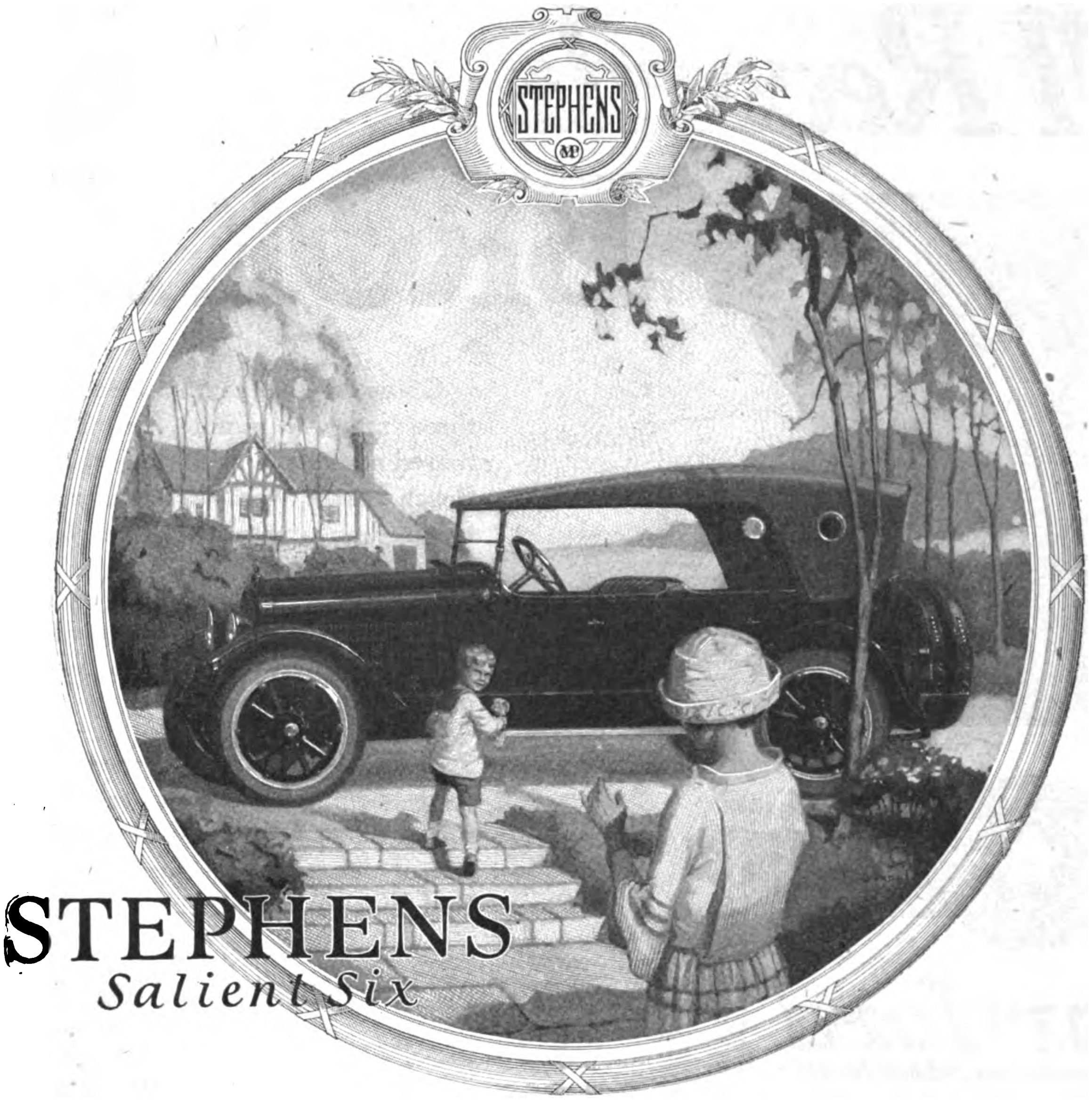
Price: $3.00

OTHER RAJO ACCESSORIES

- **Rajo Water Pump for Fords.** The only Ford pump that requires no special belt. Price: **$5.75.**
- **Rajo Valve Inspection Doors.** Save oil; keep engine clean. **$1.00** per pair.
- **Rajo Funnel-Fill Oil Cap** for quick, easy filling of crank case. Price: **$1.25.**
- **Rajo Magneto Plug Container** for quick cleaning and replacement of magneto plug. Price: **$1.00.**

Manufactured by
RAJO MOTOR COMPANY
1361 Racine St., Racine, Wis.

RAJO
ACCESSORIES FOR FORDS



Now $1595 *f. o. b. factory*

Build an Enduring Business with this Car

Stephens Salient Six popularity grows daily as people find out what a great car it is. Never, perhaps, has there been more enthusiastic response to a price reduction than that which has followed the announcement of the greatly reduced new price, a total reduction of $805 in a few months.

Constantly developed for six years, the great Stephens motor leads in efficiency. Its swift and silent 57 horse-power; its smoothness and flexibility; its economy of 18 to 20 miles on a gallon of gas, are qualities unequalled by any six of its size and power.

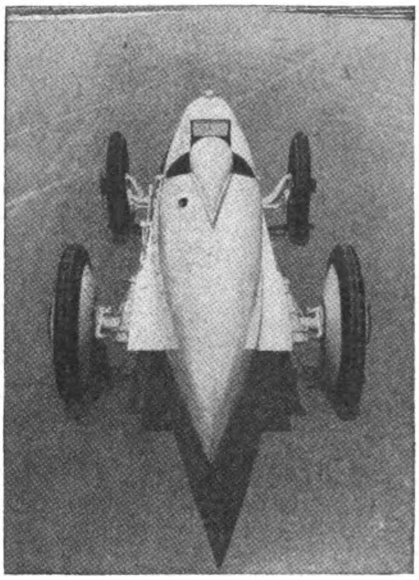
Now the new financial strength of the Stephens organization, the increased production, and the factory economies produce the *same great* car with 31 new refinements at a tremendously reduced price. There is no value like it in America.

It's a Great Car!

Stephens merchants throughout the country enjoy a permanent profitable business. Opportunities now are greater than ever. Whatever your business, write today. Develop this business in your territory.

STEPHENS MOTOR WORKS · FREEPORT, ILLINOIS

All Records for Speed BROKEN



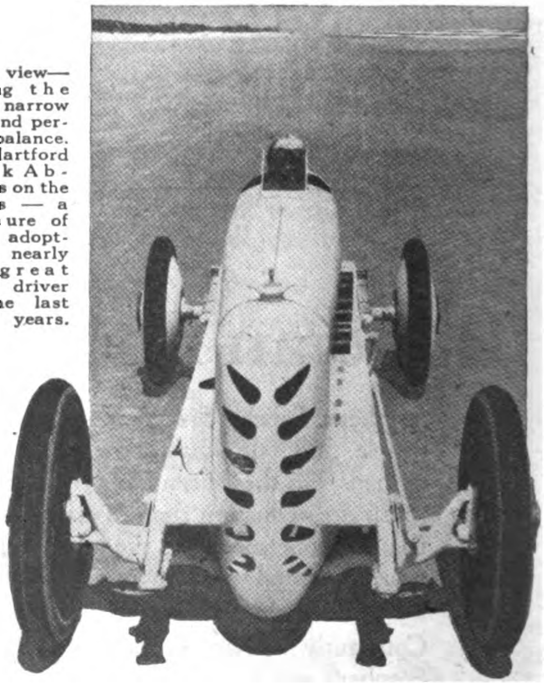
Tail view of Sig Haugdahl's Wisconsin Special showing how the lines of this car were designed to afford the least resistance to the wind.

Going at the terrific speed of over three miles a minute, Sig Haugdahl roared across the finish line at Daytona Beach nearly twenty-four miles an hour faster than any other driver has ever traveled.

His time was 19.97 seconds for one mile, lowering the world's record by more than three seconds!

Safety—keeping the wheels on the road—helping the springs to absorb the tiniest shocks which at that speed are full of disaster—was insured by Hartford Shock Absorbers.

Hartford
SHOCK ABSORBER
Makes Every Road a Boulevard



Front view—showing the trim, narrow lines and perfect balance. Note Hartford Shock Absorbers on the springs — a measure of safety adopted by nearly every great racing driver for the last fifteen years.

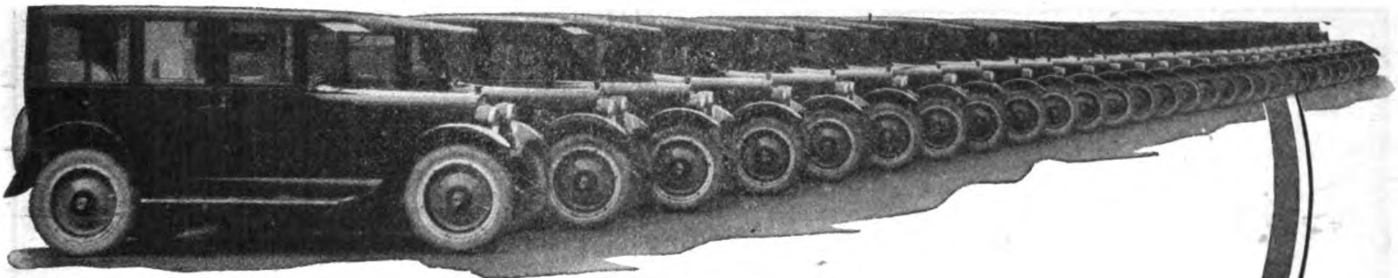
Racing cars get in minutes the wear and tear the average car gets in years. And what Hartfords do for them at destructive speeds, they will do for any car over hundreds of thousands of destructive miles of motoring.

At the new low price of $35.00 per set of four, (with standard fittings, F.O.B. Factory), Hartfords offer a more attractive sales opportunity and are selling faster than ever before. Write us for full details regarding our merchandising plan.

PACIFIC COAST DISTRIBUTORS

Reynolds & Reynolds, Tacoma, Wash.
Reynolds & Reynolds, Seattle, Wash.
Henry Lansdale, Los Angeles, Calif.
Wiggins Co., Inc., Portland, Ore.
Salt Lake Hardware Co., Salt Lake City, Utah.
Chas. R. Burman, San Francisco, Calif.

EDWARD V. HARTFORD, Inc.
35 Warren Street, New York City.



Gier Tuarc Steel Wheels are factory equipment on all models of the Rickenbacker

Sure Sales Advantages

On increasing numbers of cars built to highest standards, Gier Tuarc Steel Wheels are appearing as standard factory equipment.

From the standpoint of correct engineering, as well as of selling power, this is the strongest endorsement of Tuarc superiorities.

Tuarc wheels are best for you to handle for the same reasons that manufacturers adopt them—

There are no special hub parts to carry or to order, causing possible delay—

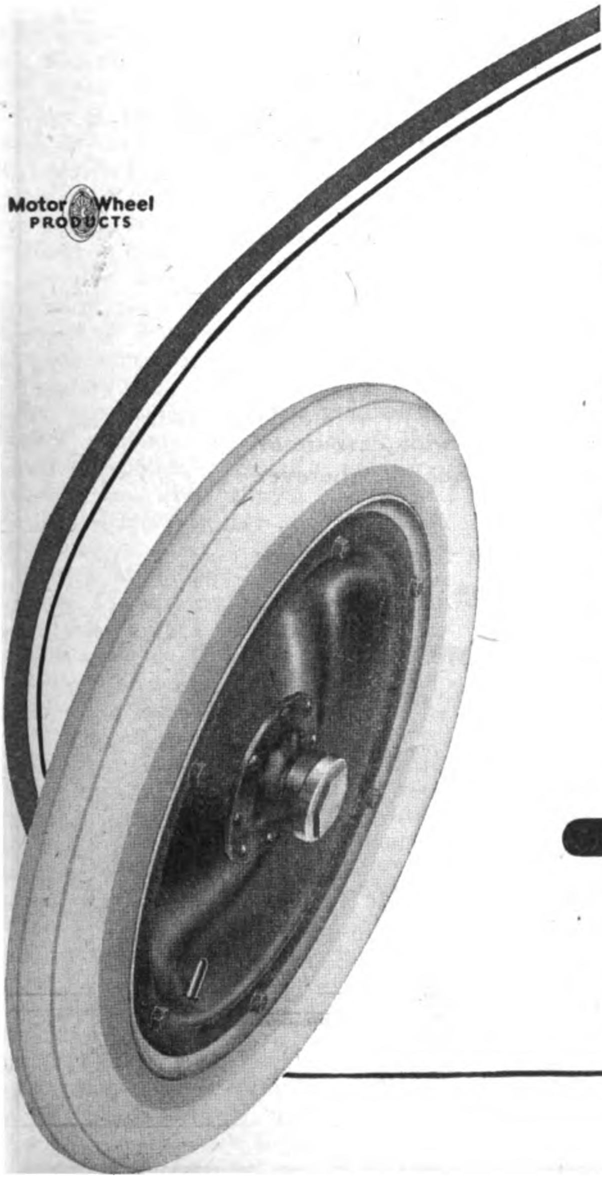
There is no new tire carrier needed, because standard demountable rims are used on Tuarc wheels; yet Tuarcs are lighter at the pheriphery than any other type of wheel using demountable rims. Tuarc design first made possible easy tire-inflation through direct outside, standard wood-wheel valve stems.

Tuarc one-piece construction, patented clamping rings and other advantages are evidence of Tuarc leadership in wheel engineering as well as in beauty. Write for the Tuarc proposition.

MOTOR WHEEL CORPORATION, LANSING, MICH.
Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

509 Fisk Bldg., B'dw'y at 57, New York
584 Commonwealth Avenue, Boston
10 South 18th Street, - Philadelphia
Bigelow Blvd. & Craig, Pittsburgh
913 Phelan Building, San Francisco
1341 So. Hope Street, Los Angeles
601 Capitol Theatre Building, 120 Madison Avenue, Detroit

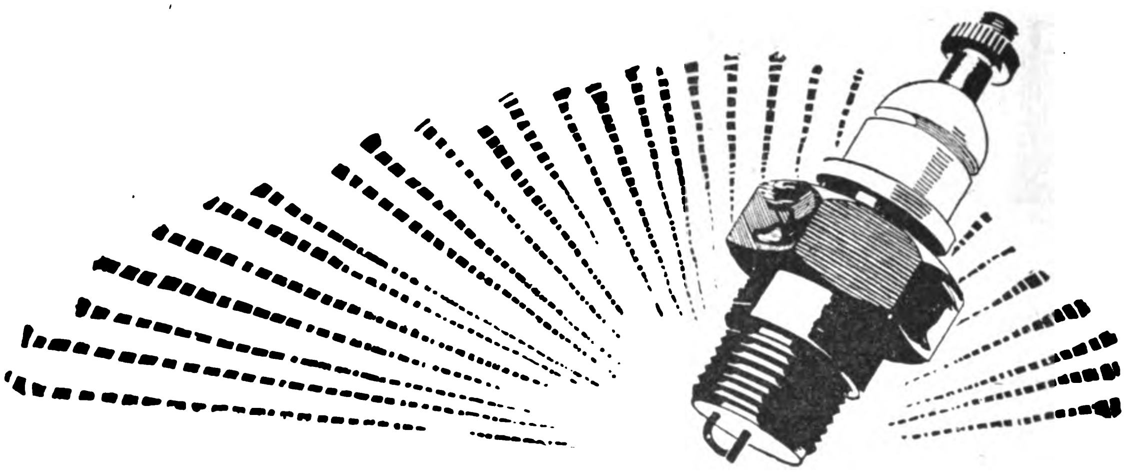
Motor Wheel PRODUCTS



Gier Tuarc

STEEL WHEELS

—a Motor Wheel Product



Every atom of "Red Crown" mixes with air

FOR POWER

"The gasoline of quality" is 100% POWER. It is refined to vaporize thoroughly. Every atom of it mixes in the carburetor for POWER. With "Red Crown" you get ready starting—rapid acceleration — greater mileage — a continuous stream of power.

Run your car on "Red Crown" and **nothing else,** and you won't have to bother with carburetor adjustments. It is uniform in quality wherever and whenever you buy it.

Fill at the Red Crown sign—at Service Stations and garages and at other dealers.

STANDARD OIL COMPANY
(California)

100% power
©1922
RED CROWN GASOLINE

The Gasoline of Quality

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII. No. 5 JUNE 15, 1922 $3.00 PER YEAR

SPOKANE UP AND AFTER VIOLATORS

Inland Empire Wasting No Siwash in Enforcing Laws, and Whole State is Against Advertising Signs.

Spokane, capital of the Inland Empire, gateway through which east-and-west travel and traffic pass via Eastern Washington and Northern Idaho, has begun in earnest to do things with respect to several matters which have been as they should not be. So has that region generally; and in the whole state of Washington an anti-advertising sign movement is on.

Spokane has become "bad medicine" for motor speeders. The system of forfeiting bonds or imposing fines on "speediacs" has been found wanting, so now conviction means a term in the county jail. One day early in June, seven car owners, including two high school students and a stage driver, faced the police magistrate and each drew a fine, the cancellation of his "white" driver's license and a sojourn in limbo.

Justice Mann has decided the only remedy for making the county highways safe has been found, and has arranged with the sheriff to set aside the fifth floor of the county jail to receive speeders. The "speediac ward" has been cleaned for their reception.

"There are times when a justice might hesitate to send a young man to a cell with murderers and pickpockets," says Justice Mann, "so I have arranged for a section of the jail for speeders. They can serve their terms there, as it does not appear proper to give suspended sentences in many cases."

Two state highway patrol officers, armed with loadometers, will be placed on duty on Spokane and Inland Empire roads, with instructions to arrest motor truck drivers who overload. The law says a truck may carry 24,000 pounds, including its own weight, if loads do not exceed 800 pounds per square inch of rubber tire surface. The first violation may be tried as a misdemeanor; the second may lose trucking license for 30 days, and a third may mean suspension of license for 90 days. Fines and jail sentences may also be assessed.

A campaign has been inaugurated by Washington's state highway department and the county engineers to remove all advertising signs from the highways. Not only are they called "blots on the natural scenery," but it appears motorists are so "fed up" on signs that they pay no attention to the warnings at dangerous curves. It is believed many accidents are caused by this.

Notices are being mailed to all sign owners in Spokane County, and by the end of June all highways in that district are expected to be free from advertising signs of every description.

The Spokane citizens' vigilance traffic squad has been revived, to report traffic ordinance violations such as cutting corners, emerging from an alley without warning at the rate of more than 5 miles an hour, passing vehicle to right, being on wrong side of street, turning in middle of block in the congested district, failure to signal change in direction or stop, obstructing traffic, without lights, reckless driving, failure to assist after accident, violation of speed limit, failure to give right of way at street intersection, and approaching pedestrian or vehicle without reducing speed.

Members of the squad are supplied with postal cards bearing a list of 15 possible violations. When a member notes a violation, he places a mark on the card at a point opposite the title of the violation. Also, he places on the card the number of the offending car and a number that indicates his own name. That is all there is to his work. The card reaches the chief of police or the sheriff, who, in turn, calls the owner of the car for an audience. A second call seldom is necessary.

OREGON TRADE IS DOUBLE-TAX GOAT

Court Decision that Dealers' License Does Not Remove Personal Property Levy Adds to Heavy Burden.

The state supreme court of Oregon has decided that payment for dealers' licenses does not absolve automobile dealers from personal property taxes on cars in their possession when the annual tax assessment date of March 1 arrives. The decision is that that exemption applies only to private owners.

The court says dealers, if not subjected to the personal property tax, might evade it by selling cars to nonresidents of the state or by keeping cars in garages, out of operation. Dealers estimate such evasion could not apply to more than a small fraction of 1 per cent of all cars handled in Oregon.

The decision means Oregon dealers will have to pay more than $100,000 in back taxes for the years 1920 and 1921. As to future taxes, they are likely to take out private licenses for all cars they have in stock just prior to March 1 each year, as long as the present law remains unchanged.

The court's ruling is in a case filed about a year ago by Northwest Auto Co., representing the Portland dealers' body. A result is to unite Oregon's automobile men more strongly than ever, in the effort to get the state's tax and license system revised to what they feel would be an equitable basis. It is declared that automobiles are taxed more in Oregon, in proportion to value, than any other class of property. The burden includes the 2 cent gasoline tax, license tax and, for dealers, the personal property levy, which they say makes double taxation.

Accessories Sell Well At Exits.

In one of San Francisco's mammoth establishments, the accessory department is where drivers, passing out, see the attractive showcases. It pays.

GEORGE M. GRAHAM SPEAKS ON COAST

Tells Joint Meeting of Motor Car and Advertising Men that Whole Year Will Be Prosperous Automotively.

Automobile men in Los Angeles and San Francisco recently entertained a notable figure in the industry when George M. Graham, member of the motor truck, highways and taxation committees of the National Automobile Chamber of Commerce, and vice president of Chandler Motor Car Co., Cleveland, appeared on the Coast for his first visit. He stopped in Los Angeles several days and made a notable address at a joint luncheon of the Motor Car Dealers' Association and the Advertising Club. He then went to San Francisco, and spoke before the Commercial Club there. He will study automotive and general trade conditions in all the principal Coast centers.

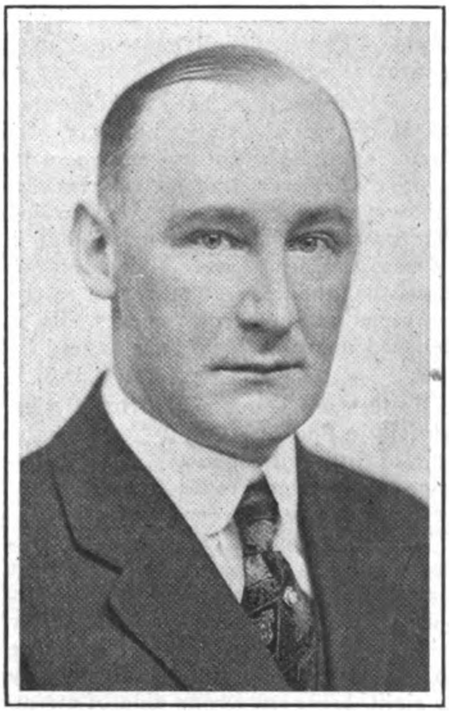
No one is better equipped to speak intelligently and authoritatively regarding the automobile industry than Mr. Graham. Before entering it he was prominent in the newspaper field, and during the war was appointed chairman of the motor truck committee. He appeared frequently before various War Department and Congress committees, and did immensely valuable work in obtaining recognition for the industry from the Government. Recently he testified before the Senate finance and post office and post roads committees and was one of the two spokesmen who discussed industrial problems with President Harding last spring.

Mr. Graham is a forceful and eloquent speaker, and on important occasions his speeches have been published verbatim in newspapers and trade publications, and thousands of copies printed and distributed throughout the country. His addresses on motor vehicle regulations before national highways conventions have been thus broadcasted to the extent of 20,000 copies.

Speaking before the motor car dealers and advertising men in Los Angeles, Mr. Graham emphasized the permanency and stability which the automobile industry has attained, and the extent to which the financial world now regards it as a barometer, along with steel and other basic, longer established activities.

"Manufacture and sales of motor cars this year have been far in excess of the expectations of leaders in the industry, and they are known as optimists," said Mr. Graham. "The first five months of 1922 have been exceptionally good, and after traveling through the United States and studying conditions, I am convinced that the latter half of the year will be as big, if not bigger. This is due to the fact that buying in the territories away from the big cities is just beginning. Purchasing in those localities has been delayed somewhat by the desire of farmers, cattlemen and others to wait on a variety of conditions. Now these have been settled, and rural buyers are coming into the market.

"One thing adding to the rush of business in 1922 was 18 months of buying slump, attendent upon readjustment of inventories to present-day prices and valuations. The tendency is now upward, I am thoroughly convinced. I know that the Chandler Motor Car Co. is paying higher prices for materials than it did a year ago. Materials are in demand in greater proportion than supply, which accounts for the general scarcity of automobiles today."



GEORGE M. GRAHAM.
Mr. Graham, vice president of Chandler Motor Car Co., Cleveland, and a recognized authority on conditions, is visiting and speaking on the Coast.

Pacific Coast Tire Items.

By erection of new factory buildings Samson Tire & Rubber Co., with plant at Compton, near Los Angeles, has expanded its floor space 34,000 square feet recently. Production has been increased from 350 to 1000 cord tires and from 200 to 500 fabric tires a day. The increased space accommodates a new calendar, a mixing plant, an additional power plant, and more tire making machinery. It represents an investment of $200,000, according to Adolph Schleicher, president of the company.

—

Jack Tire & Rubber Co., Spokane, has taken over the plant there of the former Washington Tire & Rubber Co. Output was increased recently to 70 tires and inner tubes a day, with facilities for an eventual 500 tires and tubes daily. T. G. Richards is president and general manager, and W. E. Grier, former general manager of Boston Woven Hose & Rubber Co., is plant superintendent.

—

Contracts for building the tire factory of Columbia Tire Corp. at Kenton, suburb of Portland, have been let, and it is expected to be ready for machinery in October. According to R. A. Wurzburg, president, the building will have two stories, 80x350 feet, containing 42,000 square feet, and be of concrete and fireproof. Building costs will be about $80,000, and machinery and other installations will bring the total to around $250,000. From the start 300 men will be employed, turning out 500 tires and 500 tubes a day. Shipping connections with the O.-W. R. & N. tracks are already secured by a short spur track.

—

Overland tires, manufactured by Overland Tire & Rubber Co., Omaha, Neb., will be distributed on the Coast by Stephens Tire Stores Co., Los Angeles.

—

Giant Rubber Products Co., Los Angeles, incorporated for $300,000, will manufacture the Giant inner tubes in a factory to be built at a cost of $100,000. Giant tubes are absolutely puncture-proof, according to L. A. Denker, sales manager, by reason of a thick, specially processed tread of rubber, the air pressure alone sealing a tube cut as soon as it is made. A public offering of $100,000 in stock of $1 par value is being made. A sales branch has been opened at 1037 South Figueroa St.

—

Lee tire dealers throughout Oregon, under the general leadership of the Portland branch of Chanslor & Lyon Co., during the week beginning June 11 have been holding "torture tests," to demonstrate the puncture-proof character of Lee tires. The movement is being participated in by Lee tire dealers throughout the country.

Demonstrations consist of driving cars shod with Lee tires, and fully loaded with passengers, up and down board runways studded heavily with spikes. Five Lee tire dealers in Portland, and 25 in other parts of Oregon, participated.

L. A.-SALT LAKE RECORD SMASHED

Nash Six Does 853 Miles on Zion Park Highway (Arrowhead Trail) Nearly as Fast as Express Trains.

Automobile traveling time between Los Angeles and Salt Lake City over the Zion Park Highway, or Arrowhead Trail, was lowered more than 7 hours recently, when a Nash 6 cylinder car negotiated the 853 miles in 26 hours, 21 minutes actual running time. There were alternate drivers, A. B. Marshall, and C. H. Bigelow, and Roy J. Grewer, observer. Mr. Marshall is with the service department of Troy Motor Sales Co., Nash distributor in Los Angeles. Mr. Bigelow is one of the West's leading good roads enthusiasts, and on the run helped break the record which he made himself in 1917, between the two cities. The start was made from Los Angeles at 3:45 a. m. Thursday. Littlefield, Ariz., was reached that evening at 5:10 and a night stop of nearly 9 hours was made there. Next day, St. George, Utah, was reached in 1 hour 30 minutes, and the fastest speed of all was made between that town and Salt Lake City, 326 miles being covered in 8 hours 46 minutes.

County authorities and town officials co-operated strongly in this demonstration of traveling possibilities over the Zion Park route, and kept the roads as clear of traffic as possible. The road is in the best condition ever known, according to Mr. Bigelow, except some 50 miles between Las Vegas and St. Thomas, in Clark County, Nev. Of the total of 853 miles, 140 miles now are hard surfaced, but practically 400 miles is single-track, one-way road, and of the total, 427 miles are through real desert country, much of it mountainous. The Nash representatives speak with pride of the way the car went through without mechanical or tire trouble, on "a road that beggars description, dealing destruction to fast driving of every kind." Despite all this, and drizzling rain and fog part of the way, not only was Bigelow's 1917 record of 33 hours 26 minutes broken but the trip was almost as fast as is made by express train—approximately 24 hours. In mileage the route is the shortest between Los Angeles and Salt Lake City.

Mr. Bigelow is an oldtimer in road speed annals on the Coast, as participant in the Santa Monica and Los Angeles-Phoenix races. He was the first to drive from New York to Los Angeles the southern route, in 1910.

Nash headquarters in Los Angeles states the time on the run of a few days ago, while announced as actual running time, included all time used for stops for meals, gas, etc., the only time not included being the overnight stop at Littlefield, Ariz.

When it is in condition to be "sold" to the motor-traveling public, this route, which is the shortest between Los Angeles and Salt Lake City, will become very popular. It runs through some very wonderful scenic regions. Zion National Park, not for off the route, is said to be as vivid in colorings, day or night, as Grand Canyon.

C. A. T. A. to Meet in Pasadena.

Several hundred members of the southern division of the California Automobile Trade Association will meet in Pasadena, June 26, at Vista Del Arroyo Hotel, for the annual convention, to last two days. Forty-two units, including a membership of around 2000 automotive tradesmen, from San Diego to Bakersfield, will be represented.

WAITING FOR THE BOAT.

The jinx seems to have fastened on ferryboats in the northern portion of the Bay region. Last Thursday the steamer Issaquah of the Rodeo-Vallejo ferry line smashed a rudder and drifted helpless for several hours before being towed into port. She was sent at once to drydock for repairs. Meanwhile the Aven J. Hanford is trying to keep up with the long queues of autos waiting at either end of the line. About three weeks ago the City of Richmond, running between Point Richmond and San Rafael, became disabled off Red Rock through damage to her paddle wheels, and drifted for several hours at the mercy of wind and tide.—Oakland Tribune.

Dowmetal Sales Good.

Motor Specialty Co., 1212 South Figueroa St., Los Angeles, Southern California distributor of Dowmetal pistons, has supplied the trade with a price list which shows more than 75 types and sizes of pistons now carried in stock. It has been handling the Dowmetal line for a year, and has a very active demand.

Beedee Expands Space.

Beedee Distributing Service, 613 West Pico St., Los Angeles, has taken over the entire store room for its stock of gears, axles, brake lining, piston pins and replacement parts. The concern started business two years ago, its business has expanded steadily, and it now has one of the largest replacement stocks on the Coast.

"Black spots" becoming fewer.

Sale Lake Business Quickens.

Representing one of the most important automobile agency transactions announced in the Salt Lake City territory in several months, Western Motors, Inc., a new concern, capitalized for $50,000, have been made Packard car and truck distributors for Utah, Idaho and Southwestern Wyoming. G. H. Artman is president and general manager, and R. S. Ricketson vice president and sales manager, both being recently from the East.

An instance of the good times which persist with the several authorized Ford dealers is the announcement of Covey-Ballard Motor Co. that it sold and delivered 88 new cars during May.

June business probably will feel the usual quieting down, but conditions throughout the intermountain territory are definitely on the upgrade, with cattle and wool men enjoying better prices than at any time in the past 18 months, and the mines, especially copper deposits, being opened up gradually, after from two to three years of inactivity.

"Flivverboobs" Less Numerous.

As a result of the Los Angeles drive against traffic violators, begun late in May, nearly $70,000 in fines and bond forfeitures had been netted early in June, and at this writing violations, congestion and accidents are decreasing. Other cities on the Coast, in fact all over the country, are going after the "flivverboobs"—term adopted by the American Automobile Association.

Must Label Oils Correctly.

A new Los Angeles law forbids misrepresenting oil brands. After June 20 all oil containers displayed on streets must be labeled correctly. Two persons recently convicted of misrepresenting were fined $100 each.

Hood as Campfire Shield.

Sometimes it is difficult for the motor camper to get good cooking action from his campfire when the wind is blowing hard. Some have found that the hood of the car makes a good emergency windshield in such cases.

For L. A.-to-the-Sea Boulevard.

The latest "biggest thing yet proposed for the advancement of Los Angeles" is a project to widen and beautify Wilshire Boulevard all the way from the city to the sea at Santa Monica.

Tulare to Make Its Oil and Gas.

Tulare, Calif., is to make its own gasoline, oil and by-products at the county refinery near that city, using crude obtained from Sunset field. Out-

PUTS THE KIBOSH ON CATASTROPHE

Kosac, California Automatic Accident Preventer, Said to Have Astonished Observers By Its Results.

They laughed at Westinghouse, air-brake inventor, because he proposed to stop trains automatically with wind! Without Westinghouse, millions of lives would have been lost. His memory is revered by those who take time to think about it.

Now, laugh at a name—Kosac. Then quit laughing and ponder, sanely. Kosac is something in which its backers take exceeding pride because, in tests, it has astonished observers and because it is a Golden State invention. It is an automatic brake and ignition control for minimizing traffic accidents. It is stated to be the first automatic accident preventive device for motor vehicles, on the market. God knows it is needed. A multitude of well-intentioned traffic laws evidently do not prevent, adequately. In 1920, insurance statistics show, motor vehicles injured 1,500,000 persons, resulting in 12,000 funerals! That is no laughing matter! In 1921—figures not yet available—the casualty list was much larger, National Safety Council officials state. The estimate is, 2,000,000 injured, and 15,000 funerals as a result. Of every 50 persons living in this country, one was either killed or injured in an automobile accident last year; and this year's figures no doubt will be much worse.

Hence—deep thought, resulting in a life-saving idea—Kosac. Most automobile accidents happen at speeds of 15 miles or less per hour, say traffic bureau chiefs and insurance men. At that speed, it has been proved plentifully, Kosac so softens the shock that, as a rule, no serious damage is done. From the majority of traffic accidents, the device insures the safety of the man afoot and the man in the car. Kosac has three functions:

1—When a car in motion, traveling either backward or forward, hits anything, Kosac automatically stops the car by applying the brakes, and simultaneously cuts off the ignition. Stopping ignition supplies an additional brake by compression in the motor, and insures one against the terrors of fire after an accident. Kosac operates only in the direction in which the car is going, however. A car going forward, if hit in the rear will not stop, and vice versa.

2—When the driver presses an emergency button, Kosac will stop the car much quicker than the usual way, because pressing the button simultaneously applies the brake and cuts off the ignition. Stopping the car by Kosac is of tremendous advantage in an emergency, because a second, even half a second's time in anticipating a collision may spell the difference between a serious and a minor smash—the difference between life and death.

3—When the car is parked, Kosac sounds the horn whenever anything touches the car at either end. The horn continues to blow until the pressure is relieved. The careless driver may not see the car, but hears the horn.

One must see a demonstration of Kosac to get any adequate conception of its broad scope for security. Its performance is described as a revelation.

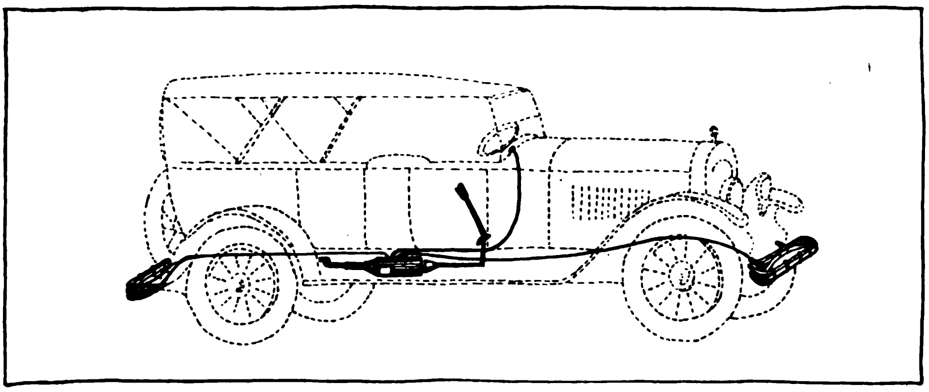
More than two and a half years have been spent in making Kosac not only mechanically perfect, but in giving it all sorts of road tests. All the work has been done under the supervision of trained mechanical engineers, to insure perfect Kosac control over brakes and ignition under the most severe conditions.

The device is sightly in appearance, mechanically simple, easily installed on any make of car and of reasonable cost. Furthermore, it does not interfere in any way with the normal driving of the car.

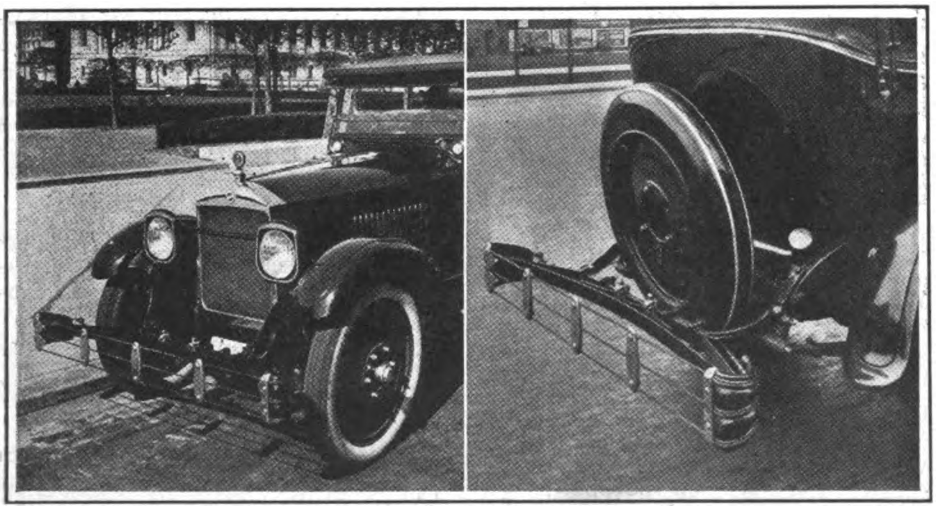
Through an arrangement with the inventor, who controls the manufacturing interests, Kosac has been placed on the market for the territories of California and Nevada through the Kosac Sales Co. California-Nevada, with executive offices at 57 Post St., San Francisco, and with salesrooms and service station at 2100 Van Ness Ave., San Francisco. A branch will be opened up soon in Los Angeles. The national distribution will be handled through offices in New York and possibly Chicago.

Extensive arrangements have been concluded for the manufacture of Kosac on the Pacific Coast by Pacific Diesel Engine Co., Oakland, and arrangements have been made for manufacturing in New York for the Eastern market.

The officers of the company are: President, K. Osten Schauman; vice president and general manager, C. J. Stacey; secretary and treasurer, Edward Fox; advertising manager, E. H. Barnum.



SHOWING SIMPLICITY OF WIRING AND POSITION OF KOSAC BRAKE AND IGNITION



FRONT AND REAR CONTACT BARS OF KOSAC AUTOMATIC BRAKE AND IGNITION

Colorado, the roof of the continent, has 42 of the 55 named peaks of the United States which exceed 14,000 feet altitude.

ACCIDENT STOPS RACES AT SALEM

Oregon's First A. A. A. Program in Two Years Likely to Be Last Till Safer Track Surfaces Are Assured.

Oregon's first automobile race program held under A. A. A. sanction in more than two years occurred June 3 at Salem, on the state fair grounds track. It ended suddenly in the middle of the last race when two of the cars collided in front of the grandstand and one of the drivers was nearly killed.

The accident, together with mismanagement and confusion evident throughout the afternoon, promises to give A. A. A. racing in Oregon a setback, just when fans were hoping that the event would mean a return of the sport.

Heavy dust upon the track, which after several preliminary races was almost blinding, was held to be the cause of the smash, and Frank E. Watkins of Portland, Oregon representative of the A. A. A. contest board, said sanction would be withheld for any more races unless the track is oiled or otherwise improved. As the state fair board has been opposed to this, more A. A. A. races in Oregon, at least in the vicinity of Portland, may have to await a board track. There is strong sentiment for such a track in Portland, and for one or two races each year, but thus far the desire has taken no definite shape.

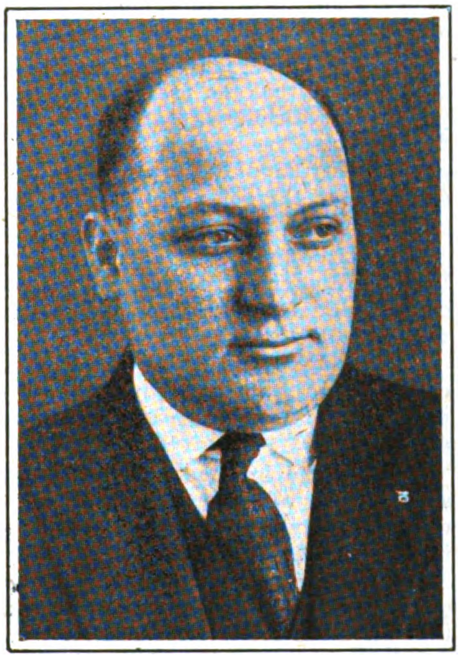
Harry ("Dusty") Rhodes of Salem, driving a Rhodes special, was the driver who was nearly killed. The accident occurred when Jack Ross of Seattle, driving a Ross special, slowed down in front of the pits to have a rag stuffed into the top of his radiator intake to replace the cap, which had come off. Ross drew well in toward the pits and kept going at slow speed, but Rhodes evidently did not see him on account of the dust and crashed into him from the rear. The cars were demolished, Rhodes was hurt seriously, and Ross and several mechanics near by were injured slightly. Rhodes will recover.

The accident was one of the most spectacular in the history of Oregon racing, as it occurred directly in front of the grandstand, not 10 feet from the starting line and within plain sight of 5000 people. Confusion was so great following the accident that it was necessary to flag down the rest of the drivers, and the prizes and money awards were given according to positions they held when the accident occurred. Under this arrangement W. I. McDonald, Portland, driving a Fronty-Ford, was first; L. E. Caul, automobile dealer of Baker, Ore., driving a Hudson special, was second; and Major Andre of Salem, with an Andre special, was third.

In the preliminaries for light cars McDonald took first, Rhodes second. In the heavy car preliminaries Caul took first. A Hudson stock car driven by J. L. Blankenship of Portland took first in its class. The races were preceded by two motorcycle events.

Do You Know the Law?

California's motor vehicle department says too many drivers don't know that section 20 of the code requires hand, or mechanical, or electrical signals before stopping, turning or changing course. The law also requires clear view, at least 200 feet to the rear, either direct or by mirror. He urges getting the code and studying it, to avoid much traffic turmoil that now is happening.



GEORGE K. CASSIDY.

Seven years ago George K. Cassidy went from Boise, Idaho, to Portland and started in the tire business with $500, which has done a lot of turning over since. Beginning as American Tire & Rubber Co., and now entitled Cassidy Tire Co., the enterprise has one of the finest tire establishments in the Pacific Northwest. Pluck, hard work, fair prices and honest merchandising are to blame, says Mr. Cassidy, who distributes India tires. The India Tire & Rubber Co., Akron, O., numbers Mr. Cassidy among a number of large accounts it has tied up with on the Coast the past few months. They are supplied from its completely stocked branch at 455 Second St., San Francisco, managed by F. L. (Pat) Ryan.

Advertising California Highways.

Railway activity in advertising highways as a means of developing travel is a new feature. One of the California rail systems has advertised in the papers of the East that California has 6000 miles of splendid highways.

The Reckless Roll.

Last year, 57 persons were killed and 283 injured in grade crossing accidents in the six states served by the Southern Pacific Company's Pacific system; a slight relative increase over 1920, despite the safety campaign. However, but for killing 13 high school students at one time, the 1921 fatalities, correlated to the number of registered automobiles and locomotive miles, would have shown a decrease of about 11 per cent. The tabulated story:

	No.	Killed	Hurt
Ran on track in front of train	420	49	164
Ran into side of train	186	4	88
Stalled or died on track	98	3	14
Skidded into side of train	46	..	5
Ran into crossing gates	85	..	5
Ran down crossing flagman	8	1	7
Miscellaneous	3	..	..
Totals	846	57	283

In 186 instances, or about 22 per cent, instead of being struck by trains the automobiles ran into trains, primarily the result of approaching crossings at such speed that braking power was not sufficient, resulting in four fatalities and 88 injuries. In 85 instances, crossing gates lowered to protect them from train were run through and broken, and in eight instances crossing flagmen actually were run down by motorists and injured."

How Hughson Helps Employes.

Employes of William L. Hughson Co., San Francisco, are made more happy and efficient by the arrangement of the entire roof of the company's new building. A large glassed-in room on the roof provides a meeting place, called a democracy room; a modern miniature hospital with all first-aid facilities; a gymnasium; two handball courts; and a tennis court. There are parking spaces for 50 cars, with a ramp wide enough to permit machines passing each other. Also, an automatic electric elevator runs to the roof.

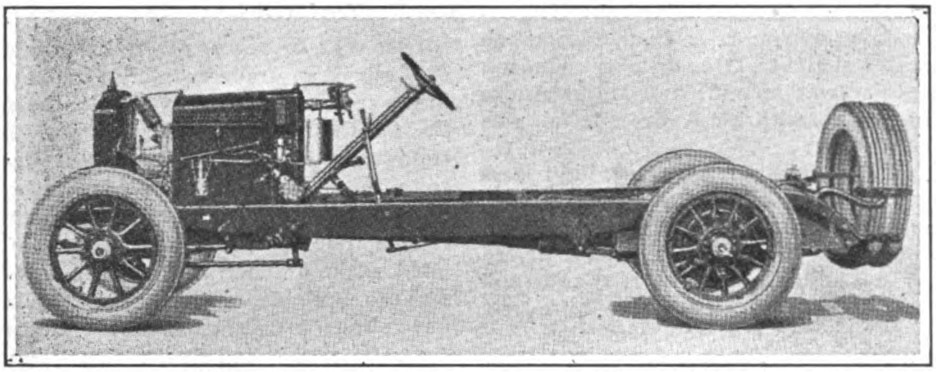
Want Drivers' Eyesight Tested.

An eye test for all automobile drivers is called for in a proposed bill presented at the recent convention of the California Association of Optometrists in Los Angeles. Defective vision is the cause of a startling percentage of automobile accidents, according to champions of the bill.

Speedometer Ordinance Up Again.

About 10 months ago Los Angeles' mayor vetoed an ordinance requiring speedometers on all motor vehicles. The police chief and city prosecutor now urge its passage over the veto.

Got a little motoradio in your car?



CHASSIS OF DOBLE STEAMER, SAN FRANCISCO PRODUCT.

NEWS ABOUT THE DOBLE STEAM CAR

Rumors Fly, But Evidently a Plant Is to Be Erected at Atascadero, Maybe One Near Los Angeles Also.

On this page is a picture of the chassis of the Doble steam car, and a line stating it is a San Francisco product. That is correct—the chassis was built in the Bay City.

The June 1 issue said it is expected to build the car in Los Angeles. That also was correct, according to a statement accredited to E. G. Lewis, who heads a project, now nearing construction, for a beautiful and complete community on the Palos Verdes (Palos—hills; Verdes, green) Estate, 16,000 acres, overlooking a vast area of land and sea, and part of what in fact is Greater Los Angeles, as the site adjoins the harbor district of Los Angeles, at San Pedro. The statement accredited to Mr. Lewis was that contracts have been signed for the erection of a factory in the panhandle section of Palos Verdes Estate. The first sum needed for work on the new community's various buildings, etc., $15,000,000 (less than half the proposed total), has been underwritten, the subscriptions being mostly by small investors in Southern California.

Further, it is announced that at Atascadero, a wonderful town about midway between San Francisco and Los Angeles, on the shore route, a Doble plant to cost $2,000,000 will be erected. This also is accredited to Mr. Lewis, founder of Atascadero. The sum also is said to be $100,000.

Meantime, the plant of Doble Steam Motors, Inc., is at 714 Harrison St., San Francisco. An Atascadero paper quotes Abner Doble, one of the brothers who compose the company, as saying he expects to take 175 skilled mechanics and their families to that town, which is near Paso Robles. The erection of the plant is to be immediate, it is reported. Also, it is said orders already in hand will keep it going at capacity for two years. The present idea is said to be to make a custom-built $8000 car and, on account of great interest taken, to seriously consider building also a car of smaller size, at about $2000, the latter to be made in San Francisco, perhaps.

It appears that the first new factory will be in Atascadero; that the first car from it may be expected about August 1; that about 25 cars will be produced there this year, 150 to 200 next year, perhaps 500 in 1924, and so on.

It is stated the bodies at first will be built by Walter M. Murphy Co., Pasadena, Calif., but that later the bodies will be Doble-made.

Conflicting news lessens confidence, especially in a new product, and to most people the Doble steam car is new; but—

The Doble brothers demonstrated several years ago that they had something worth while. Their car was exhibited at certain shows, and about 11,000 persons are said to have given orders, each with a $500 deposit, and that when the country entered the war, development was halted and some $5,500,000 had to be refunded to depositors.

In the 5 years since the car has been perfected further—engine, steam generator and electrical parts improved and simplified. Without pretense at racing qualities ,the machine is said to be able to do 60 to 80 miles an hour easily, and to have run up and down Twin Peaks, in San Francisco, at an average of 45 miles an hour including slow-ups for turns. Its light weight is distributed evenly; it starts from cold in 30 seconds; can go at any speed, from high to zero, under full engine power; is, in fact, a car that, with its new financial backing and the public interest evident at the last Bay City show, may become a powerful factor in the motor car market—which once was a steam car market, anyway.

The car is simple to drive. It has remarkable flexibility. To change speed the throttle lever suffices. Operation is practically silent at all speeds. Vibration is not appreciable. Either kerosene, distillate or gasoline serves as fuel. There is no danger of stalling. Cylinder carbon is absent because no fuel is ignited there. Crankcase oil changing is obviated. The case needs no washing out, as no unburned fuel, dirt, water or carbon enters it. The same oil bath lubricates the engine's moving parts and rear axle parts, engine and axle being a unit, with drive shaft and universal joints eliminated. The engine turns over only 900 revolutions per minute at 60 miles per hour, instead of 3000 as in most gasoline cars. The engine has no adjustable bearings. They are large and show no wear even after years of use. Oil consumption is only about 1 pint per 500 miles.

Control is electric. Turning a switch starts the car from cold. Forced draft permits maintaining high power—75 to 100 h. p. vaporizers, pilot lights, pressure on fuel, are eliminated. There is no burner plate; no preheating of fuel, hence no clogged fuel passages; changing kind of fuel involves no change of burner, nor adjustment. The automatic control and maintenance of steam pressure is by means that operate in efficient condition indefinitely.

A Doble steamer built in 1916 has run approximately 50,000 miles without appreciable deterioration and is practically as efficient as ever, it is stated.

The new Doble era began officially on April 26, when Doble Steam Motors was incorporated in Delaware, with authorized capital stock $10,000,000, and the Doble brothers are quoted as saying E. G. Lewis has underwritten their enterprise to the sum of $2,500,000.

The new 1922 catalog is well worth obtaining. It contains much information including specifications; and the body styles shown are extremely classy.

Earl Does 62.06 Miles a Gallon.

A few days ago the same Earl car that did 51.3 miles per gallon of gasoline in the Los Angeles-Yosemite economy run, did 62.06 miles per gallon, or a shade better than 100 ton miles per gallon. It went from Los Angeles to San Diego, 128 miles, on 2$\frac{1}{16}$ gallons of gasoline. As to water and oil, the radiator and crankcase, filled at the start, were still full at the finish. The motometer registered "cold motor" all the way. Weather was cool and foggy. The stock car had its tires inflated hard, and its top down. At San Diego its total weight was 3230 pounds, including luggage, the driver, with George Wurzburger, of H. J. Wurzburger, Inc., the Los Angeles distributor; and Frank Fiske of the Los Angeles Evening Express, observer, as passengers.

BETTER ASBESTOS PRODUCT SERVICE

Maker of Emsco Lining Absorbs Only Yarn Manufacturing Plant West of Chicago, Benefiting Coast.

Pacific Coast to the fore again! The E. M. Smith Co., Los Angeles, already widely known as maker of Emsco brake lining and other asbestos and rubber products, has bought all Eastern financial interests in West Coast Asbestos Co., whose factory is at Downey, near Los Angeles.

The move makes the Smith brothers' investment in the two plants $1,500,000, and with full control they intend to expand. They look for active co-operation from distributors of the lines mentioned as well as textile beltings, packings and other things, as it means relief from long-haul freight rates.

The desired co-operation will develop an expansion practically without limit. The Downey plant is the only asbestos factory west of Chicago, and the business available to an organization of sufficient power is tremendous. The Downey plant, which began a year ago, is considered invaluable as a nearby source of supply of asbestos needed for making things in which it is used. The plant was planned for a daily capacity of 8000 pounds of asbestos yarn and its resultant products. The plant includes a mill for crushing the ore, a cording mill, spinning and weaving mills; all for asbestos articles, from narrow tapes to yard-wide sheets in all thicknesses.

In Los Angeles, on the 4½ acre site on Clarence St., an additional building, 50x150 feet, is to be erected at once, to house two new 60-inch rubber mills, on the way from the East, and which will double the capacity for producing rubber belting and other mechanical rubber goods.

Also, a new warehouse, 120x120 feet, will be erected immediately, opposite the present Los Angeles plant, and other facilities will be added.

The enterprise is not devoted exclusively to automotive needs, but it means making those needs less dependent upon far-distant supply; and indirectly automotive trade in the Far West will benefit additionally by similar advantage being given hardware and machinery people.

Goodyear Whistles Celebrate.

The giant whistle at the plant of Goodyear Tire & Rubber Co. of California, Los Angeles, blew exultantly 45 times one morning recently. At the same hour Goodyear factory whistles at Toronto, Ont., and Goodyear, Conn., produced a similar concatenation of yodeling; all in celebration of the fact that the 45,000,000th Goodyear tire had just been completed at the Akron plant.

June 14 will see the consummation of the second year of operation of the Coast factory at Ascot Park, Los Angeles. It has produced more than 1,000,000 tires for the Far West region and trans-Pacific countries.

Gardner Booms in Far West.

Strong evidence as to the revival of automobile buying in the Far West is given in a sales map of the entire United States, prepared by Gardner Motor Co., Inc., St. Louis, to show how Gardner sales during the first five months of this year compare with those of the same period of 1921. The eight large Far Western distributors acquitted themselves excellently, Billings showing 980 per cent increase; Portland 940 per cent; Spokane 740 per cent; Denver 326 per cent; Los Angeles 300 per cent; Seattle 280 per cent; San Francisco 255 per cent; and Salt Lake City 100 per cent.

MERE FOUNDATION.

We have today a Wall Street prosperity; a good bond market; money obtainable at declining rates; but that is not national prosperity. When you have imported in a single year $700,000,000 of gold, and reduced paper circulation $1,000,000,000, and have brought above 100 per cent the reserve on Federal Reserve notes, and have put the Federal Reserve total against paper and deposits above 76 per cent. you have fundamentals for prosperity, but not prosperity. That kind of prosperity—Wall Street prosperity, must come first, because you must have prosperity at the hub of your system first.

You have the money line right, but not the transportation line. Business begins in the production of goods for one's neighbor. It depends for its expansion and profit on the number of neighbors one can reach.—Clarence W. Barron, before Economic Club, New York.

Dilks to Handle Pins and Rings.

William H. Dilks Co., headed by William H. Dilks, with years of Pacific Coast automotive experience, has opened in an attractive sales room, 1835 South Flower St., Los Angeles, to handle piston pins and piston rings manufactured under its own name.

The Los Angeles branch of Firestone Tire & Rubber Co., during a recent period, led all Firestone branches in the country in sales, according to official word from Akron.

Arizona Notes.

Gasoline recently jumped 2 cents a gallon to 30½ cents in Phoenix, Ariz., where about 9000 gallons is consumed daily, principally of course by automobiles. This includes the 1 cent state tax, which brings in about $14,000 a month revenue to the state highway fund.

The Northern Arizona Automobile Association has been organized at Prescott, Ariz., supplanting the old Prescott Racing Club. It has 17 charter members, and money in the treasury, and has elected Fred Bolden manager, and Walter Wilks secretary-treasurer. Staging automobile races with real competition on the Prescott track will be its chief activity.

Federal Tire Official on Coast.

H. A. Githens, vice president of Federal Rubber Co. of Illinois, Cudahy, Wis., was a recent visitor on the Coast, and to the Hawaiian Islands, where he studied mid-Pacific business conditions. Orders with the factory, he states, are already 60 per cent greater than last year's. Traveling Coastward, he established Federal tire warehouses in Denver, Salt Lake City, and Portland, the two latter cities to be supervised from San Francisco.

Noble Co. in New Building.

Noble Co., Los Angeles, distributor and service agent for Prest-O-Lite storage batteries and acetylene tanks, will open in a handsome new 2 story building, Figueroa and 18th Sts., about July 4. The company, formerly styled General Service Co., is now headed by J. M. Noble, one of the founders of Prest-O-Lite Co., Inc., Indianapolis, with J. G. Brown, also formerly with the factory, as sales manager.

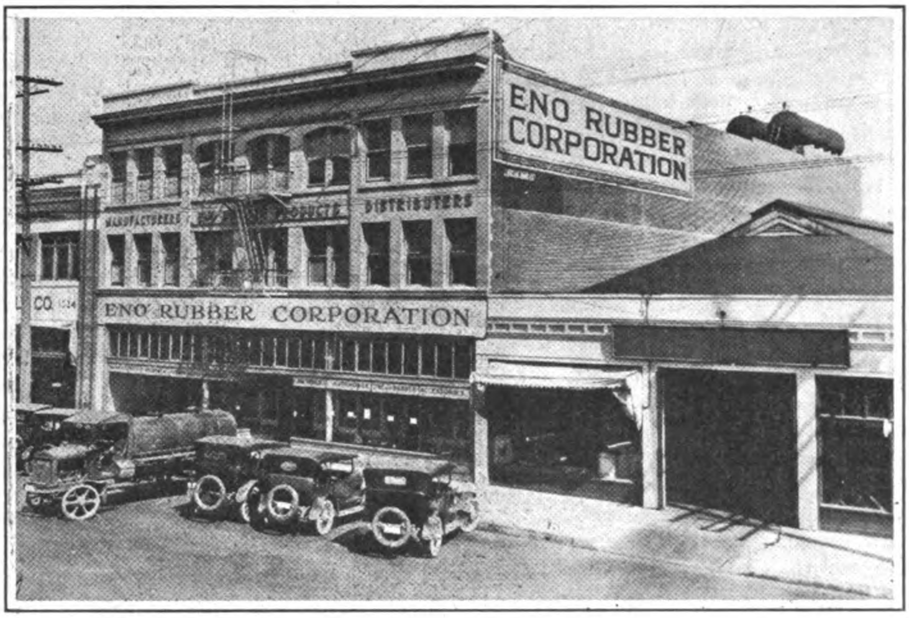
Start on Star Plant in July.

Star Motor Co. of California has bought five acres of land adjacent to the factory of Durant Motor Co. of California, on East Fourteenth St., Oakland. Not later than July the erection of an office building, and a U-shaped warehouse, connected with railroad shipment facilities by a spur track, will be started, an official of the company announces.

New Chanslor & Lyon Building.

Chanslor & Lyon Co., large Coast accessory sales concern, will have a 4 story and basement brick building, to cost $100,000, erected for it in San Francisco, on Polk St. between Ellis St. and Willow Ave.

Get out from under the canopy now and then and get into a coat of tan. There for the asking, at all beaches.



ENO RUBBER CORP. PLANT IN LOS ANGELES, MAKING EXSO TIRE CASINGS, ETC.

ANOTHER CASE OF COAST INITIATIVE

Eno Rubber Plant, Begun Eight Years Ago in Los Angeles, Reincorporated and Doing a Big Business.

On June 9 there appeared in Los Angeles newspapers, as an advertisement, a reproduction of a typewritten letter on the letterhead of Eno Rubber Corp., 1026 South Los Angeles St., signed by W. J. Voit, vice president and sales director. It was addressed "To the Public," inviting anyone to send for a booklet on rubber manufacture, or to call in person and be shown through the factory, with a view to sharing in its prosperity.

The foregoing is stated, with the explanation that what follows was in preparation before the advertisement appeared and without knowledge that it would appear. The following, in fact, was based on the recent news that Eno Rubber Corp. had taken over the entire plant which George W. Eno Rubber Co. had been operating at the address given and that the reorganized concern intended to expand, to keep pace with the growing demand for its Exso tire casing, Eno inner tubes, radiator hose, windshield weather strips, blowout shoes, vulcanizers' repair materials, plumbers' rubber specialties, motion picture rubber goods and a large variety of other rubber articles used industrially.

The Exso casing, a patented Eno product, is vulcanized to the old casing as an outer shell, practically making it new. It is said to have a large sale among tire and vulcanizing shops and garages. The other products also are having such splendid sale that it was decided to reincorporate, with authorized capital of $500,000. The entire 3 story building, 100x140 feet, with floor space exceeding 42,000 square feet, now is in use. Mixers, mills, callenders, presses, vulcanizers and all the usual paraphernalia of rubber manufacturing are working full time. The new installations enable the plant to turn out $1,000,000 worth annually, and by the end of April it was expected the demand would overtake this capacity within a year. Since then, evidently, the expectation has become so strong that the advertisement resulted, telling the public that orders now are coming in faster than the goods can be turned out with the present working capital; that every resource is being strained to the utmost; that the volume of business in the next fiscal year is expected to more than double that of the preceding year; and that with larger capital with which to buy materials, and relatively small additional equipment, three or four times the present volume of orders could be handled within the next 12 months.

A million dollars a year is big business; but in an earlier statement Mr. Voit said that, entirely aside from the straight manufacture of tires, Pacific Coast orders for automobile rubber accessories alone total $25,000,000 a year. He said it is absurd, inasmuch as Los Angeles is the point of cargo discharge for crude rubber from the East Indies, Central and South America, to send it across or even half way across the continent, to have it manufactured, and brought back here, with freight both ways added to the cost.

"The rubber industry is growing in Los Angeles," said Mr. Voit, "as fast if not faster than steel, furniture, building materials, etc., as witness the success of the local tire makers, the new tire factories in prospect and the expansion of plants; and it is a safe prediction that within a few years factories for making every known form of rubber goods for automobiles, and industrial and domestic uses, will be a matter of course in the industrial districts of Los Angeles."

That the prospect will develop as Mr. Voit says it will, there are many indications, including the dim way in which too many Eastern manufacturers see the Pacific region, on account of its distance from them.

The demand, Mr. Voit points out, is increasing rapidly with fast-increasing population. "The use of rubber in many different forms", he says, "has become so general that it is practically an indispensable commodity in the daily lives of the people of the civilized world. The Eno plant was established in a small way 8 years ago, and has demonstrated that rubber manufacturing in Los Angeles is profitable.

"We have the coming market for crude rubber, and the time has come to manufacture these goods right here. It stands to reason that, with our favorable climatic and labor conditions, and ability to produce at less cost because of greater efficiency in consequence, together with the saving in freight charges, we can keep this $25,000,000 a year right here, to build up our own region, instead of sending it to the East."

Roy R. Messer is president and general manager of Eno Rubber Corp. W. J. Voit, vice president and director of sales, formerly was with Norwalk Tire and Diamond Rubber. C. K. Morton is secretary-treasurer.

"Putting the Bee" On 'em.

It is estimated the present Los Angeles drive against motorists of the care-free-and-careless sort, soon will have yielded $100,000 in fines and bond forfeitures. On June 13, Police Judge Chambers "put the bee" on about 400 violators. The previous day 368 were tried, fines totaled $3660, no cases were dismissed and only two fines were suspended.

Employment Decidedly Improved.

The Department of Labor district employment service director in San Francisco, June 13, said the employment situation in Washington is vastly improved; in Oregon, unemployment negligible outside of Portland; California, decidedly improved, a surplus of unskilled labor being absorbed gradually on construction projects and farms.

For your own sake, study the laws.

WORK OF C. S. A. A. DOING MUCH GOOD

San Francisco Headquarters and System of Branches, Signposting, and So On, Serving Many Thousands.

Much good work is done for its 30,000 or more members and the public, by California State Automobile Association, which has its headquarters in San Francisco but has a system of branch offices.

Ten thousand yellow-and-blue steel road markers will be placed in Northern California by the association in 1922. Several thousand will be erected prior to the touring season. Forty-three counties are to receive additional signs.

Three trucks will be used. Seven counties in which there are now but few road signs are to be completely signed. They are: Sutter, Plumas, Mariposa, Trinity, Tuolumne, Del Norte, and Sierra. Completion of the work outlined, it is claimed, will make Northern California the most completely signed territory in the country.

Three hundred parking limit and safety station signs are being erected in Oakland, in co-operation with the city council. Of this number, 220 signs warn motorists to park their cars parallel with the curb and announce a limit of 40 minutes from 10:00 a. m. to 6:00 p. m. In the past, motorists parked diagonally with the curb.

The new parking district includes Washington St. from Fifth to Fourteenth, Broadway from Tenth St. to Piedmont Ave., and portions of Eleventh, Twelfth, Thirteenth, and Fourteenth Sts. Eighty signs mark safety stations.

By arrangement with the district attorney in San Francisco, C. S. A. A. membership cards will be accepted in lieu of bail in misdemeanor cases. The association deposited a guarantee fund to insure the city against any loss through operation of the new plan.

This arrangement, says Secretary Watkins of the C. S. A. A., does not mean that the association will relax efforts to stamp out reckless driving and flagrant violations of the law. Its membership cards are generally accepted as bail throughout Northern California.

Chowchilla Mountain, on Wawona Road, and the grades on Big Oak Flat Road, both leading to Yosemite Valley, for many years have given grief to motorists if roads or their cars have been in bad condition. California State Automobile Association to the rescue! A fully equipped tow car will serve its members on each, as to mechanical trouble, or to take them to the nearest shop in case of breakdown. Signs on both roads will direct members to the tow car stations. The car on Big Oak Flat Road will serve from Carl Inn to Crane Flat, where some grades approximate 20 per cent. Similar grades are found on Chowchilla Mountain between Merced and Wawona, where the second tow car will be stationed.

International Touring Service.

With the arrival of Sir Julian Orde, general manager of the Royal Automobile Club of Great Britain, in San Francisco, arrangements were perfected by the California State Automobile Association for international touring service for its members, the result of a conference between Sir Julian and Secretary-Manager D. E. Watkins

The Royal Automobile Club of Great Britain, which has central headquarters in London, has twelve branches throughout Europe. The arrangements call for reciprocal service service between the C. S. A. A. and the European organization. Sir Julian inspected C. S. A. A. headquarters on Van Ness Ave. He asserted it is a greater service organization to motorists than his club. According to Sir Julian the R. A. C. is primarily a social organization, maintaining the largest club house in England.

Buggy Mighty Hard to Find.

Someone wanted a new buggy, and a vehicle house in Portland, Ore., finally found one in a little interior town, after unsuccessful inquiry in Salem, Pendleton, Eugene and Medford.

Regular riot of flowers on deserts and the big hill slopes, these days.

Zane Grey on Bennett-Tormey & Co.

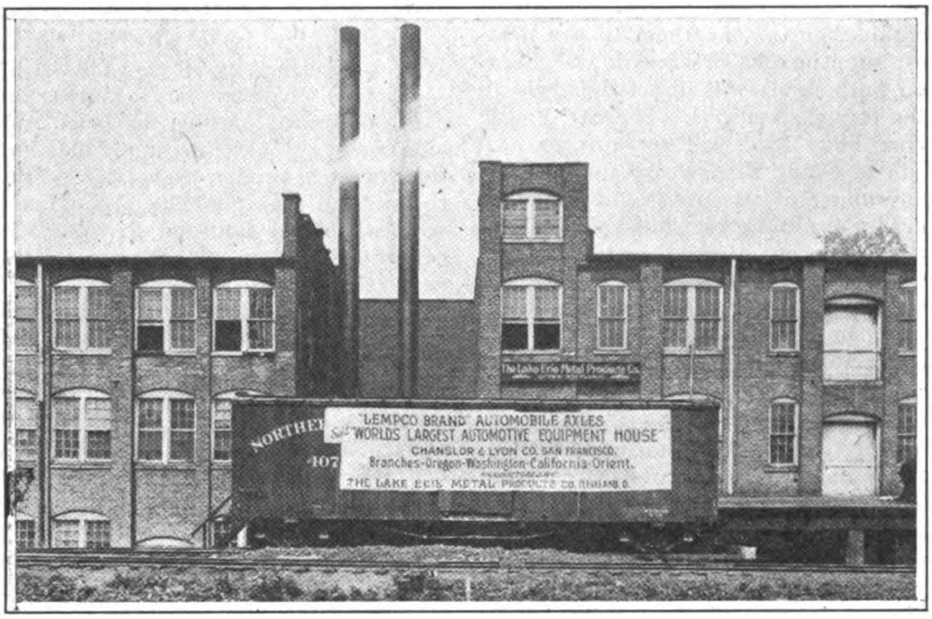
In the May issue of The Hayes Wheel, published by Hayes Wheel Co., Jackson, Mich., Zane Grey, famous author, described vividly, in brief, the allurement of Arizona and the Far Southwest generally, as preface to the rock-ribbed dependability of Hayes wire wheels in hot and dry climatic conditions, and to a send-off for Bennett-Tormey & Co., composed of W. C. Bennett, James S. Tormey and Harry Goldman, who have combined as manufacturers' representatives at 1128-1130 South Los Angeles St., Los Angeles. A building is being erected at 15th St. and Grand Ave. The lines handled include Hayes wire wheels; the carburetors, jacks, etc., made by Sunderman Corp., Newburgh, N. Y.; and the safety signals of Case Mfg. Co., Jackson, Mich. Each member of the company has a creditable and long automotive record. Bennett is president, Tormey vice president, Goldman secretary-treasurer.

Tacoma to Draw Strongly.

In view of extensive publicity throughout the Pacific Northwest, and lower price schedules, a record crowd, between 25,000 and 30,000 persons, is expected to witness the eleventh annual race on the Lakeview track at Tacoma, Wash., July 4. Tickets and reservation salesmen have been sent all over Washington and northern Oregon, and already the reservation list is greater than in any previous year. Walter C. Baldwin, speedway manager, is now in the East and expects to sign up a field of the best drivers at Indianapolis.

Hayes-Bormann Co., Oakland, has been made Eastbay distributor of Brunswick tires.

IN PALM CANYON, CALIFORNIA, WHICH MAY BE MADE A NATIONAL MONUMENT.


The Lake Erie Metal Products Co.
NORTHER
407
"LEMPCO BRAND" AUTOMOBILE AXLES
"WORLDS LARGEST AUTOMOTIVE EQUIPMENT HOUSE"
CHANSLOR & LYON CO. SAN FRANCISCO.
Branches-Oregon-Washington-California-Orient.
THE LAKE ERIE METAL PRODUCTS CO.

CARLOAD OF LEMCO AXLES AND SHAFTS FROM CLEVELAND TO THE PACIFIC COAST.

HERE'S A MAKER WHO "SEES" WEST

Lemco Axles and Shafts, Manufactured in Cleveland, Coming to the Coast in Carload Lots

In the East there are manufacturers of important component parts of automobiles who give this reason for not seeking orders in the Pacific region:

"We seek business only from motor car makers."

It's a reason—no doubt about it; the kind that is not based on good reasoning, hence not a good reason; in fact it is one of the big reasons why, in the Pacific region, there are springing up, or already well established and flourishing, concerns which make the same kind of important component parts. Some of these concerns are run by Western men, others by Easterners who came, saw opportunities too good to pass by, kicked themselves for not having seen them before they came West, and got busy.

An exception to what almost may be called the rule is Lake Erie Metal Products Co., Cleveland, O., production specialist in automobile parts. In witness, note this news:

It is assured that motor car dealers, garage men and accessory establishments, not only in Western America but in the Orient, will be given quick service in respect to the best quality of axles and shafts—the Lemco brand—by the fact that the Cleveland factory has so excellent a Pacific Coast distributor as Chanslor & Lyon Co., San Francisco, which has district offices and warehouses in Spokane, Seattle, Tacoma, Portland, Oakland, Fresno and Los Angeles, and has branch agents and sales representatives in Hawaii and other Pacific islands and the Orient.

The picture of a carload of Lemco axles and shafts, shipped from Cleveland to Chanslor & Lyon Co., indicates the volume of business the arrangement with so capable a distributor is producing.

In all Chanslor & Lyon branches a complete stock of Lemco axles and shafts is kept, to equip all popular makes of cars.

Thomas M. Gardiner, the "Whip Man," well known manufacturers' agent at 320 Market St., is the exclusive Lemco representative in the Western states, Hawaii, the Philippines and Asia.

Coast Draws Heavily.

Among recent prominent visitors to the Pacific Coast from the Eastern factory centers are the following: E. C. Morse, general sales manager of C. H. Wills & Co., Marysville, Mich.; George M. Graham, vice president of Chandler Motor Car Co., Cleveland; F. D. Engle, sales manager of Transport Truck Co., Mount Pleasant, Mich.; Lynn M. Shaw, assistant general manager of National Automobile Dealers' Association, St. Louis; J. H. McDuffie, sales manager and assistant general manager of Cole Motor Car Co., Indianapolis; Howard F. Smith, assistant sales manager of General Tire & Rubber Co., Akron, O.; D. A. McConnell, Klaxon Co., Newark, N. J.; and F. W. Fitz, vice president of Autocar Co., Ardmore, Pa.

In driving all night, a roadside nap of 20 minutes at dawn helps a lot.

Oakland Trade News.

Announcements regarding several new agencies for prominent makes of cars have formed the chief feature of automobile trade activities in Oakland recently.

T. D. McLaughlin has been appointed Stutz car dealer for the Eastbay territory, with sales room at 29th and Webster Sts.

Ulrey-Noteware Co., Broadway and Piedmont Ave., Leach car distributor, has added the H.C.S. car for Oakland.

Motor Inn Garage, headed by I. F. Baker, has opened with the Moon car agency in its new building, 2061 Webster St.

H. G. Markham has bought the interests of his partner, S. C. Purser, in Markham & Purser, Oldsmobile and Columbia agency, for a large cash consideration.

The Oakland car agency for Alameda and Contra Costa Counties has been taken by S. C. Purser, opening at 2519 Broadway.

White Co., San Francisco, headed by G. A. Urquhart, Coast manager, has opened a sales and service branch in Oakland, built along the same general plans as other White truck branches throughout the country. Clifton O'Brien, with the San Francisco sales force 7 years, is branch manager, associated with H. R. McKaig, recent foreign representative of C. L. Best Tractor Co.

Cole Motors, Inc., San Francisco, has made E. R. Pelz branch manager in Oakland.

Collier & Brooks, Chevrolet agency, have opened a branch at 152 12th St., with J. P. Corey as manager.

Weaver-Wells Co., Studebaker agency, sold 85 new cars in May, 60 per cent more than in May of last year.

Nash sales with Pacific Nash Motor Co., Oakland, in the same month, were 33 per cent more than in April.

Important in the Oakland car unit and parts supply field is the opening of an Eastbay branch by Colyear Motor Sales Co., Coast distributor of Continental engines, Borg & Beck clutches, Thermoid-Spicer universal joints, and other complete units and parts. W. M. Phelps is manager of the sales depot opened at 274 12th St.

Sure You Can.

A unique use for wornout automobile tires by Mexico's working classes is to cut them out with a sharp knife in the shape of the foot, attach leather thongs, and wear them as sandals. Thus you may find the Mexican peon walking across the sand, leaving behind him the trail of the familiar diamond shape All-Weather tread of the Goodyear tire.

BAY CITY LIBERAL HOST TO SHRINERS

Thousands of Dealers' Cars and Others Carry Visitors Around Town and to Races at San Carlos.

The annual national convention of the immense Shriners' fraternity, in San Francisco, June 12-15, has absorbed for four active days the best energies of San Francisco civic authorities and business men. From the start of preparations, weeks ago, the automobile trade has stood prominently to the fore as the automotive committee of the Shriners' entertainment activities, and to its unstinted aid and co-operation is due no small share of the success of the elaborate program.

The relation between the convention visitors and the San Francisco distributing trade was unusually intimate, because many dealers are Shriners themselves. A great number of new, handsome cars were released from sales floors into the service of Shriner officials and members, and several thousand more were obtained through the appeal made by the committee, through William L. Hughson, chairman, to the car owners of San Francisco.

On June 14, down the peninsula at San Carlos Speedway, the visitors were regaled with 150 miles of automobile racing, in which several of the country's best known speedway drivers were represented, a semi-stock car race, a Ford dealers' race, and an attack on the world's 100 mile stock chassis record.

In the meantime, sales of passenger cars and trucks in San Francisco continue at a satisfactory rate, though indications point to a lower total for June than was shown by the previous month. May, indeed, was a month to which dealers throughout Northern California generally can look back pleasedly. It was unusual in that it surpassed April, although motor vehicle sales are expected to decline after April 15, and always have in the past. May in Northern California showed 6819 car and truck sales, compared with 6432 in April. Compared with May of last year it showed 52 per cent increase.

Sales of Nash cars in San Francisco totaled 56, the highest single month's registration since the car was placed in the territory, according to Carl J. Simpson, vice president and general manager of Pacific Nash Motor Co.

May sales of Studebaker cars, distributed by Chester N. Weaver Co., exceeded those of May last year by 36.4 per cent, and would have been much greater if the company had had the cars available to fill all orders. The first three months of 1922 showed 150 per cent gain over the corresponding part of 1921.

H. O. Harrison Co. delivered 327 Hudson and Essex cars in March, April and May, of which 225, or 68 per cent, were enclosed cars.

J. W. Frawley, Inc., report that Gardner car sales in Northern California during the first 5 months of this year were 255 per cent greater than in the same period of 1921.

Cadillac sales in May showed practically no slackening off from April, and were 100 per cent ahead of those of May, 1921, according to Don Lee. The company is well fortified against any possible temporary shortage by having a good stock of new cars on hand, covering all models, and is handling an active used car business.

Greer-Robbins Co., states E. W. Milburn, San Francisco manager, handled during the first 5 months a business 275 per cent better than that of the same months a year ago.

New individual models continue plentiful. Among them are the Buick 6-55 sport touring, Marmon 4 passenger speedster, Hupmobile demi-coupe, Templar De Luxe and 5 passenger touring, Dodge Brothers business coupe, Jordan coupe, and Chandler metropolitan sedan.

The Traffic truck, manufactured in St. Louis, is to have active wholesale representation on the Coast with the opening of sales quarters by R. Jackson Jones at 86 Sutter St. Mr. Jones at one time was traffic export representative, and was stationed in London, Eng.

J. H. Williams, who served for a year as sales manager of H. O. Harrison Co., now is an independent Dodge Brothers car dealer at Santa Rosa, with Sonoma, Napa, Lake, Mendocino, and part of Marin County as sales territory.

Diehl Talks to Rotarians in L. A.

George C. Diehl, of Buffalo, president of American Automobile Association, was among the many thousands present at the international Rotarian conclave in Los Angeles, last week, and made an address, "Attendance the Creator of Rotary Activity."

It was a happy week. Many red-fezzed Shriners, on their way to their own conclave in San Francisco, stopped off to help make it happier. The Sacramento Rotary Club gave it the flavor of '49 by riding around in a truck, each man costumed, bewhiskered, etc., as in the old, wild days of Superior California.

The city's largest auditorium, splendid but inadequate, was used for the meetings. The city's lack of a civic auditorium of suitable size caused newspaper editorial comment.

"Rick" Reaches Coast By Train.

Capt. Eddie Rickenbacker, accompanied by Steve Hannagan, who did the excellent Indianapolis race publicity, and two others, "hopped off" at New York on June 7 in an all-metal monoplane and expected to alight in San Francisco June 12. He got there for the big Shriners' conclave, but it was by train from Omaha. Coast papers recorded his progress in big type.

Three Entrances To Garage.

The Post Street Garage, in San Francisco, has provided three entrances, each leading to a different level. The entrance at the extreme right leads to the basement, and the one at the extreme left to the second floor. Access to the street floor is through the center entrance. This is an open-air garage, none of the entrances having doors.

CAMP CAJON, IN CAJON PASS, NEAR SAN BERNARDINO, CALIFORNIA.

Many thousands of motorists enter sunny Southern California from Mojave Desert through Cajon Pass. Down the pass a ways, toward San Bernardino, is Camp Cajon, where the equipment includes concrete tables donated by the Rotarians, and other conveniences.

L. A. DEALERS SHOW IMMENSE CAPACITY

Fourth Annual Jinks Featured By An 18-Course Dinner at Hotel Durant in Mountains—Sales Buzzing.

The fourth annual jinks of the Motor Car Dealers' Association of Los Angeles, June 3-4, was an unparalleled success, it was voted by the 90 or more dealers who attended. They sped to Hotel Durant at Lebec, on the Ridge Route, and partook of an 18 course dinner. Following songs by a special quartet, and humorous monologues, two automobile editors of rival newspapers launched into an imitation fistic combat, the lights flashed out and "guns" popped deafeningly—all this being very well acted, and deceiving many of the party and hotel management.

Two new distributing agencies have appeared. The National car returns to active representation with the opening of National Motor Sales Co., 1414 West 7th St., as Southern California and Arizona distributor. It is headed by H. R. Mahoney, former Owen Magnetic factory sales manager, who will be Los Angeles branch manager, and F. O. Dorris, a San Diego dealer of long standing, who will head the San Diego branch.

The C-T electric truck, manufactured in Philadelphia, will be distributed in the city and county by Commercial Truck Co., 926-28 South Los Angeles St., headed by H. C. Degner. The truck is made in seven models, with carrying capacities of from ½ to 5 tons, and 91 to 132 inches wheelbase.

Paul G. Hoffman, Inc., report that Studebaker sales in the city up to June 1 totaled 1100 cars, compared with 440 in the same period of 1921, 335 in 1920, and 166 in 1919. Sales for all Southern California in the first 5 months of 1922 were 2286, or 973 more than in the similar period last year. During Mr. Hoffman's absence at the factory at South Bend, Ind., his sales force, under stimulus of a sales contest engineered by Earl Carpenter, sales manager, surpassed their average of 60 sales a week by a comfortable margin the first week, sold 94 new cars and 61 used cars the second week, and on the last day averaged one new car order every 15 minutes of working hours. More than 200 used cars were sold in May.

The Southern California branch of Reo Motor Car Co. of California has sold 484 Reo Speedwagons since its opening in August, 1921, to a recent date, an average of two trucks every working day, and 259 new passenger cars, better than one car a day, according to Byron C. Foy, branch manager. In the first 18 days of May, 34 Speedwagons were delivered.

Gardner car sales in Los Angeles during the first five months of the year have been 300 per cent greater than in the same portion of 1921, while the corresponding total increase of shipments from the St. Louis factory shows a 220 per cent increase.

Harold L. Arnold, Inc., has disposed of 256 Essex coach models, either directly or through dealers in Southern California and Arizona, since the arrival of the first models last November up to recent date.

Harris M. Hanshue, head of Apperson Motor Car Co., factory branch, reports that in a 6 weeks period 20 new cars were sold at retail, 17 of them to previous owners of Apperson cars.

Moon Motor Co., headed by Omar C. Wicklin, recently received its first shipment of the new Moon 6-40 models. All of these have been sold, and several more carloads are en route.

New factory offerings are the Nash 6 cylinder 4 passenger sport car; Duesenberg roadster; National 1922 models; Chandler metropolitan sedan; Cole ultra sport sedan, brougham, sportster, and standard 7 passenger; and Buick 6-55 sport touring car.

Among recent visitors to the factory centers have been C. A. Roesch, head of Alemite Lubricator Co. of California; John J. Troy, president, and Robert S. Breyer, sales manager of Troy Motor Sales Co.; and Walter M. Brown, who attended the Indianapolis race and went on a month's Great Lakes cruise in the yacht of Harry C. Stutz, head of H. C. S. Motor Car Co., for which Mr. Brown is a distributor.

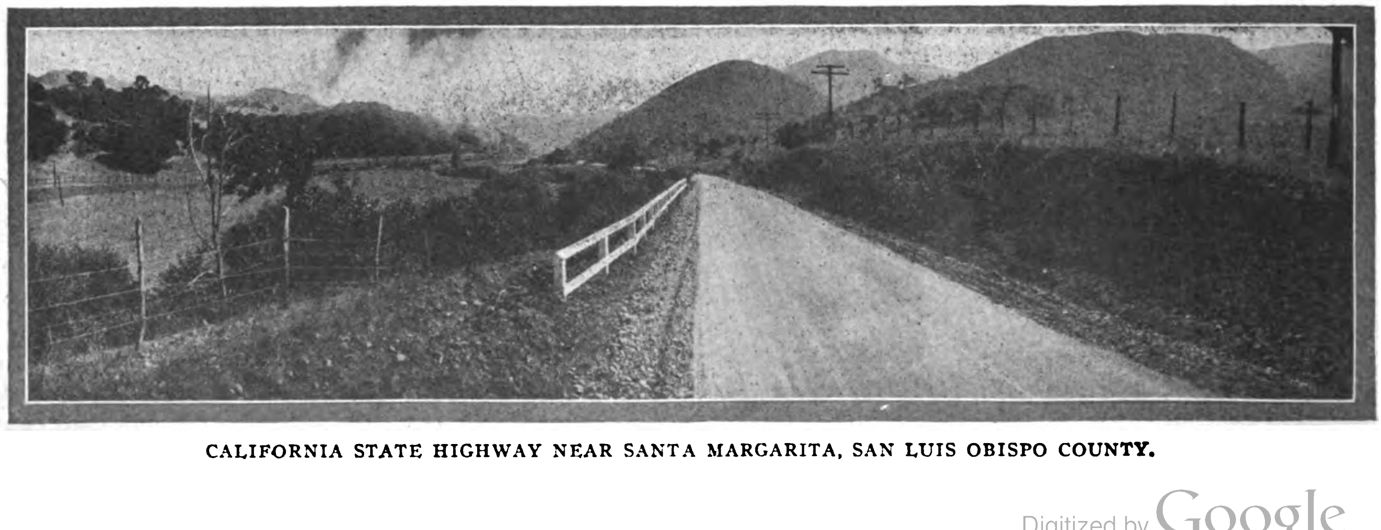
A challenge to any distributor of a 6 cylinder car selling within $300 of the delivery price of the Stephens car, to an economy run between Los Angeles and San Francisco and return, has been issued by O. R. Fuller, head of White Auto Co. The run would be under A.A.A. rules and the observation of George F. Stephenson, A.A.A. technical representative. Mr. Fuller states $1000 will be awarded to the distributor of any car making an economy average better than that of the Stephens. The rules would be the same as those which governed the award of the Los Angeles-to-Camp Curry sweepstakes and take into account gasoline, oil and water consumption. Any 6 cylinder car of standard open touring type, selling between $1595 and $2195 Los Angeles, will be eligible.

George C. Ginn has been made service superintendent of Don Lee, Cadillac distributor, in charge of garage, service and repair departments.

House & Meyer, Inc., formerly located on South Grand Ave., have moved the Cole car agency to large quarters at 1020 South Figueroa St., it is announced by E. M. House, manager.

Police Whistle in Yosemite.

Rangers have called to motorists to stop, when they have failed to regard Yosemite Valley regulations. It did not work as well as the shrill traffic cop whistles now in use.



CALIFORNIA STATE HIGHWAY NEAR SANTA MARGARITA, SAN LUIS OBISPO COUNTY.

THOMAS WINS THE SAN CARLOS EVENT

Walkaway for Joe, Who Averages 107 an Hour in 150 Mile Race Run to Help Make a Shriners' Holiday.

'Most anything on the Coast looks good to the umpty-steen thousands of Shriners who are attending their golden jubilee at San Francisco this week; and many of the nobles, perhaps, never saw a man win a 150 mile automobile race at speed averaging 107.05 miles per hour; but to the motor car speed cognoscenti the 150 mile event won at San Carlos yesterday, June 14, by Joe Thomas, Frontenac, was uninteresting compared with other races they could remember.

Joe won in 1:23:34.20. Roscoe Sarles, in his rejuvenated Duesie, was a bad second by laps. Art Klein, in a new-type Frontenac, third; Peter De Paolo, driving the Duesenberg Hearne used till he went into vodeville, was fourth, and his uncle, Ralph De Palma, Duesenberg, fifth—the last of those who finished.

"Howdy" Wilcox, Peugeot, and who won the 1919 Indianapolis race, got half way; then, broken valve.

Jules Ellingboe, Canada's champ, in a Duesenberg, broke a connecting rod.

Otherwise, nothing startling. De Palma drew the pole, started out in his usual smiling way to win, but almost immediately was overhauled by his nephew, De Paolo, who at four laps gave way to Thomas, who led to the end. Sarles and Klein also passed De Paolo, at 112 miles. De Palma, after going to pit three times (tires), spurted into fourth position at about 100 miles but soon dropped back.

There were 13 entries but only 7 starters. Among the entries were R. G. Durant, Hill, Melcher, Nordenschud, Dalen and D'Alene.

A 25 mile race for Fords, after a slow start by a goodly field, was an interesting event, won by Gheffoli & Maggini in 21:28.8, averaging 60.98 miles an hour.

Capt. Eddie V. Rickenbacker, Shriner himself, handled the flags.

There was a noon barbecue, then airplane stunts, the Ford dealers' race, and a jump by John W. Alden in an Overland. He went up a wood slope and jumped to a down slope 18 feet away.

—

The grandstand and grounds had been in the hands of contractors and landscape experts three weeks, resulting in much improved appearance. The motor car tunnels have been concreted, waterproofed and separated from the pedestrian tunnels. A new concreted pedestrian tunnel has been constructed under the grandstand, leading under the pits to the infield.

—

The Imperial Council of the Shrine, and Potentates, with their ladies, occupied boxes. The uniforms of Shrine bands and patrols, in various groups, gave the grandstand variegated colorings; and of course it was well dotted with red fezzes.

—

It was expected Wilbur D'Alene, who was entered at Indianapolis to drive a Monroe, by Monroe Motors Co., would compete in this race in the Anahuac (Mexican for Old Mexico), a 4 cylinder car which was pictured in Motor West, April 15. This new car was designed in Indianapolis by Ad. P. Buquor, who interested an El Paso financier and prominent Mexicans in his project to have the car manufactured in Mexico City, by Mexicans.

—

Bill Yeager, automobile editor of the San Francisco Examiner, took a spin around the track, a couple of days before the race, with De Paolo. They went a mile and a quarter in 39 seconds, at the rate of 117 miles an hour. Yeager's decision: "Never again!"

Some Delinquency!

Due largely to increased new car registrations and the activity of the state highway patrol and police authorities in checking up delinquents, nearly 20,000 more motor vehicle licenses had been issued at Olympia on June 1, 1922, than up to the same date of last year. Fees were more than $300,000 greater. Up to June 1 this year 180,713 sets of license plates had been issued, compared with 161,136 last year. The June 1, 1922, total has thus already equaled the total reached by August 15, 1921.

California Gas in Washington.

In view of rising gasoline and oil costs throughout the country, the entrance of Associated Oil Co., the large California oil producing and refining concern, into the Seattle and Western Washington territory is an interesting topic. The first Associated branch in the state has been opened in Seattle, with James C. Downey as manager. Selling will be mainly through retailers, although the company will use four service stations of its own. The initial shipment by steamer into Puget Sound consisted of 460,000 gallons of gasoline, unloaded at Seattle for distribution throughout the Pacific Northwest.

Seattle Trade Notes.

Four new agencies, three for passenger cars, and one for motor trucks, have been announced in Seattle lately.

The Stephens car has been secured by Potts, Hyde & Potts, 517 East Pike St., for Western Washington. The company is headed by W. H. and J. A. Potts and Ray Hyde.

Jensen Brothers-Turner Motor Co., 1512 11th Ave., has been formed to handle the Columbia Six west of the Cascades, by H. L. and O. A. Jensen, former prominent jewelers, and H. L. Turner, previously with a local bank.

Richardson Motor Co., announced 6 weeks ago as new Chandler distributor, has opened sales quarters at 1412 12th Ave., with the complete Chandler line. Avery Richardson is president, and L. B. Hanna sales manager.

Republic Truck Sales Corp., a direct factory branch, the second one to be opened on the Coast, following the San Francisco establishment, succeeds Scott E. Bird, former independent distributor of Republic trucks. Mr. Bird becomes branch manager, with R. G. Hubner, for 5 years Seattle branch manager for White Co., as retail sales manager. New quarters will be occupied July 1 in the Hefferan Building, Bellevue Ave. and East Pine St.

Parts and general repair service on Saxon, Davis and Metz cars, not now actively represented in Seattle, will be supplied by Herbert W. Brougham, 1115 East Union St., as official factory service agent.

Nevada Has 9640 Cars.

At the beginning of June there were 9640 motor vehicles in Nevada with 1922 licenses, or 423 more than on the same date last year, according to Secretary of State Brodigan. Registrations have increased notably since the state police, and county and city officials opened a vigorous campaign against evaders of the license tax. Offenses of this kind have been numerous, state police inspectors report, in the shape of painting over last year's plates, the use of two license plates required for front and rear of one car as the rear plates for two cars, and also abuse of dealers' license privileges.

Friends Miss Paul Stair.

Park J. Stair, tire division manager of the Los Angeles branch of United States Rubber Co., died recently at the age of 41, following an operation. He formerly was manager of the tire department of Chanslor & Lyon, but joined United States Rubber in 1910. His death is lamented by an unusually large number of personal friends and business acquaintances.

Motor West
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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JUNE 15, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

One Wants to Be Kind, But—

A RECENT newspaper item headed "Bandits Beat Up a Kindly Autoist," told that William Dirks of Lankershim, near Los Angeles, offered a ride into town, to two men he saw walking on the road. They accepted his offer, then beat him, tossed him out, and drove away in his car.

That's the sort of thing that curdles the milk of human kindness.

If Imposed Upon, Use Your Club

OODLES of fines for traffic violations, these days. It serves motorists right—if it serves them right. From a couple of cases reported to Motor West it appears possible that there may be numerous injustices, not only in Los Angeles, where the two cases occurred, but elsewhere.

Section 20 (n) of California's vehicle act says that before changing his course or stopping, a motorist shall signal "if the movement or operation of other vehicles may reasonably be affected"; and the various signals are described. Nothing in the law requires signalling if the "coast is clear". Yet a motorcycle officer, apparently placed at a street end to nab all similar "offenders", handed a summons to a driver who, quite according to the law, turned at that point without signalling. The victim told it to the judge, but the judge was very busy and fined him $25.

Before the same judge was a man from up north who had no tag. Up there he had dealt direct with Motor Vehicle Department headquarters in Sacramento. He had been in Los Angeles only a month, did not happen to know or think about a local branch, sent his money to Sacramento, showed the judge papers proving he had done so and that his tag was on the way—and yet the judge said: "Ten dollars! Next time, know enough to buy your tag here."

If the judge were either of these motorists, wonder what he would have said—not to, but about—the police and himself?

If sufferers in such cases would report them to their automobile clubs, presumably the clubs would do something in their behalf. That is what clubs are for.

So So—But It Should Be More So

MOTOR WEST is rather fond of mentioning, especially for Eastern readers having ability to do things, instances of enterprise in the Pacific region developing remarkably, and often because Eastern ability to do things did not meet the needs of a vast but distant realm; needs which only practically close-up attention, in the way of supply and advertising, can meet adequately.

The idea is to be stimulatingly helpful. One cannot know what is in a book without opening its pages. Doing so helps situations, automotively and otherwise, to develop.

In 1856 even Congress lacked information about the character of the country west of the Mississippi. It was indicated in geographies as the "Great American Desert". Now that name sometimes is given to an expanse less than 140 miles wide, in Utah, and which properly is named Great Salt Desert. It has in it sand, salt, mud, flat places, mountains. Some day, somehow, it will be utilized, as practically all other desert land in the West will be.

Long after 1856 the whole Great West was believed in the East to be a Sahara. In 1856 Congress made an appropriation for raising camels with which to traverse it! More than one herd was imported to Texas, and died—disgusted perhaps, at the lack of sand. A Californian offered to put on a transcontinental camel route for five sections of land.

The book of knowledge about the whole West, the Pacific region especially, is being opened and read more and more. Only a few pages have been read, at that. Those who are studying the book most are finding it profitable reading.

A Valuable Coast Contribution

ON opportunity, Motor West sings in praise of Pacific region initiative. This is not vanity, conceit, egotism, but information of value to those born in or who have come to the region, and those who do business with it; and especially those whose business with it will be improved if they realize the region's vim often is due to lack on their part.

This is another little pæan of praise, of an illustrious example of Pacific region progressiveness — Herbert Hoover, Secretary of Commerce. Since he took that office, it has developed a marked contrast to other departments. It is not static, but dynamic, in its contact with the people; not a depository of a vast mass of dead data, but a most active transmitter of it, and a stimulator of wide co-operation in making its work a success. No other Federal department functions so well in this respect.

Note the Automotive Division, the chief of which, Gordon Lee, is to confer personally with trade men on the Coast in July. Perhaps Mr. Hoover, who is a Californian, told Mr. Lee to come; not restrict his attention to men of the East, in Washington. No matter, he is coming, and there will be good results.

A Swipe at the Yucca Hounds

DOES it ever occur to a motorist, asks the Kansas City Star, that if he didn't strip that red bud or that wild plum of its bossoms and stick them in his car to wither and die, someone else who came that way after him might have a chance to enjoy their beauty?

Undoubtedly some, not all, motorists are referred to. If some of the practically mechanically operated human beings who call themselves motorists, and who run along home, these wonderful California days, with one or perhaps two or three marvelous yuccas in their cars, and when they reach home stack the yuccas up in the backyard to wither and die and be thrown away, could hear what decent motorists say about them in passing, their ears would burn even if their intelligences would not be stimulated.

Here and there, amid green or motley-colored growing things, stands a yucca, perhaps 20 feet high—a beautiful, cream-feathered sentinel on a hillside. Why destroy it? Only an expert student of the mechanico-mental processes of mutts can answer.

The Pendulum Swings Countryward

MORE than ever, evidences are to be found today of the necessity of the motor car. The building of large subdivisions, far from railroad or street cars, is on all through the country. Development of such districts is made possible by the motor car; without it they would be impossible. On a recent trip by a Motor West man from Detroit to New York, much of this building was to be seen, and inquiry made at intervals proved that the motor car alone was responsible. Babies born in cities have grown up and are breaking away, and they are large buyers of cars. Retired business men, too, are taking up residence away from the broil of the city and are joining the younger people out in the country. Cities continue to grow, but the limit of congestion appears, by good signs, to be near; and the tendency to leave large centers for the country is unmistakable.

Why L. A. Laundry Bills Are High

ANOTHER thing—while the prices of automobiles are receding, why is it that laundry figures remain so altitudinous? asks the Los Angeles Times.

One reason is that people let laundrymen "do" them; but regardless of prices, Los Angeles laundry bills are high because the present mayor's picayune predecessor "saved" the city $60,000 a year by eliminating vacuum street cleaning, substituting the old flushing method. As a result, oily dirt is caking up and presently, perhaps, may be salable as peat or cut up into fuel briquets; and not only are laundry bills higher, but so are all bills caused by deterioration of everything on and in a motor car, as well as on and in its occupants. The total is very much in excess of the $60,000 a year which is "saved."

LaFayette Motors Co. Recapitalized

New York news, June 2, was that LaFayette Motors Co., of Indianapolis, had been reorganized. The announcement, by Lee, Higginson & Co., bankers, stated a special stockholders' ratification meeting would be held immediately, and indicated a new name, with capitalization of $7,000,000 in preferred and 30,000 shares of no-par common stock. A statement received since from the company in Indianapolis does not confirm the A. P. dispatch but announces $2,000,000 additional capital, no change in personnel, and no intention of any production splurge, the idea being to continue gradual, orderly development of the already high standing of the LaFayette car. Charles W. Nash, president of Nash Motors, heads the directorate.

Willys Plant Bought for Durant

News on June 9, from Elizabeth, N. J., location of the plant of Willys Corp., was that on that day Joseph P. Day, representing the Durant interests, had bought the plant for $5,525,000. The property, valued on the company's books at $14,000,000, included the factories, 38 acres of land and 700 feet of railway siding.

Don't Know Where From, but Coming

A leading Detroit banker admits, in speaking of the sudden revival in purchase of motor cars: "I do not know who is buying them, but I do know they are being bought and paid for quicker than at any time since I have been an observer of the business." He also noted more conservative management and predicted large reserves to meet any future "rainy day."

It's all right to be sluggish in the manner of Babe Ruth.

Calendar of Coming Events

June 15—Annual Convention, National Park to Park Highway Association, Sacramento.

June 17—Annual 150 Mile Classic, Uniontown, Pa.

June 19-20—Summer Convention of National Automobile Body Builders' Assn., Detroit.

June 19-23—Automotive Equipment Assn. Convention, Colorado Springs, Colo. June 24 also, if necessary.

June 20-24—Summer Meeting, Society of Automotive Engineers, White Sulphur Springs, W. Va.

June 26-27—Annual Meeting Southern Division of California Automobile Trade Assn., Pasadena, Calif.

July 4—Eleventh Annual Automobile Race, Tacoma Speedway.

July 15—Grand Prix Road Race in Alsace-Lorraine, Auspices Automobile Club of France.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in connection with Brazilian Centenary.

Sept. 4.—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

Sept. 4-9—Automobile Sow, Spokane.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Nov.—Los Angeles-Phoenix Road Race.

Nov. 8-12 (tentative)—Olympia Automobile Show, London.

Nov. 11—Armistice Day 500 Mile Race, San Carlos, Calif. Purse $50,000; Citizens' Lap Prize Purse, $25,000 or more additional.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 13-28—Automotive Equipment Assn. Annual Show, Chicago.

Nov. 30 (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

May Shipments Break Record

Automotive Industry's Basic Position Made Plain at Annual Meeting of N. A. C. C., June 9

NEW YORK, June 9.—Nothing more clearly indicates the increasing demand for the transportation of persons and merchandise than the record production of motor cars and trucks as reported to the annual meeting of the National Automobile Chamber of Commerce in session here today.

May shipments, with a few companies still to be heard from, were record—in excess of 252,000 passenger cars and trucks, an increase of 53 per cent over May of last year and 15 per cent over April of this year. The heaviest previous production was 220,000, in March, 1920.

Reports received at the meeting, attended by more than 100 motor vehicle manufacturers, showed an increasing demand practically everywhere except Maine and Georgia. Many of the agricultural states are showing substantial increases over last year, with excellent prospects in June for cars and trucks.

It was shown that the April exports of passenger cars gained more than 49 per cent over March, while the exports of trucks increased 44 per cent. Thse products went to 114 different countries.

The meeting discussed a broadening of its campaigns for the prevention of accident, more standardization in motor cars that will make for lower production costs, continued research in motor fuel matters, standardized and better service for users, a demand for stronger enforcement of motor vehicle laws in preference to putting more laws on the books, and plans for assuring efficient expenditure of highway funds.

President Charles Clifton, who presided, said:

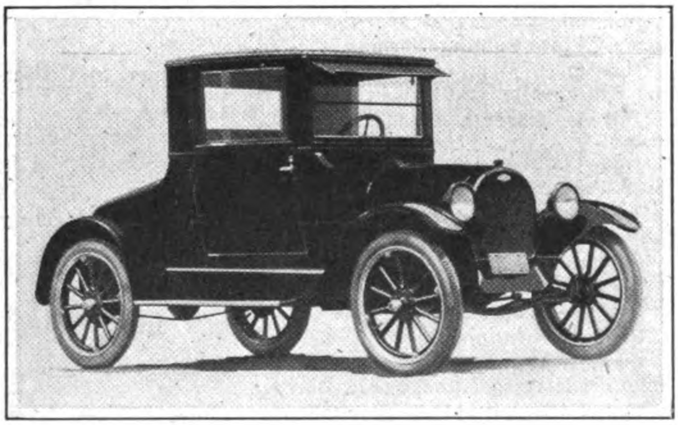
"Reduced costs to the public, in line with the fall of raw material costs, account for the revival of the automobile industry above the normal business curve. Never before have the models been so attractive, and never before have the prices been so attractive, thus permitting the public to get its full value immediately for the deflated dollar.

"This revival of a two-billion-dollar industry will strengthen general business conditions, due to the demand which it makes upon copper, steel, aluminum, leather, lumber and other basic materials."

Julius H. Barnes, president of the Chamber of Commerce of the United States, addressing the meeting, predicted the prompt revival of business, with a consequent increased need for motor transportation. He noted, as one reason why America can invest so heavily in motor vehicles, that the American family has to pay out only 40 per cent of its income for food supply, whereas the European pays 60 per cent.

Assuming a readjustment of economic conditions in Russia, that country should be an outstanding automobile market, the speaker indicated. "If in America the otherwise necessary expansion of railroads has been checked and replaced by the development of motor transport, and if in the test of competition, motor transport justifies itself against the steam railroad in new areas—then Russia, with its 200 million of people and its vast distances and its scanty railroad lines, offers a great field for motor development."

Charles Clifton, (Pierce-Arrow), was re-elected N. A. C. C. president. Directors re-elected were: Roy D. Chapin (Hudson), C. C. Hanch (Lexington), J. Walter Drake (Hupp), H. H. Rice (Cadillac), John N. Willys (Willys-Overland). The following in addition to President Clifton, were elected officers for the year: Roy D. Chapin, vice president; C. C. Hanch, second vice president, passenger car division; Winsor T. White, second vice president, motor truck division; A. J. Brosseau, secretary; H. H. Rice, treasurer; Alfred Reeves, general manager.



NEW CHEVROLET UTILITY COUPE IS $720 FACTORY.

It is claimed the Utility Coupe, new Chevrolet model, is the first passenger automobile designed particularly for commercial and professional use. It lists at $720 factory. It is of the 2 passenger single seat type, with a fine black Fisher-built body; a seat 41 inches wide with a back 21 inches high—designed to support the whole spine; wide side and rear windows, the former with Ternstedt regulators for great ease in raising and lowering; exceptionally wide doors, with 28 inch opening, fitted with double latches and anti-rattlers, lockable and faced inside with high grade imitation leather to resist wear. An outstanding feature is the 15 cubic feet capacity of the rear compartment, large enough for a steamer trunk, plus a number of samples, advertising matter, instruments, etc. The enviable Chevrolet motor, of course, with the new quiet, easily adjustable valve tappets; and the strong, quiet, spiral bevel ring gear and pinion as part of rear axle construction. Equipment is very complete, including nonskid cord tires.

Papers Refuse Help-Wanted Ads

An interesting commentary on the condition of the labor market insofar as the automobile industry is concerned is contained in a recent experience of the Standard Motor Car Co., Inc., Pittsburgh, maker of the Standard Eight. It is also an interesting reflection of the remarkable recovery of the automobile industry.

Recently the Standard through its advertising agency, mailed advertising copy to newspapers in about a dozen cities. These advertisements were an appeal to high-class workmen who specialize in automobile body and engine work, workmen desired by the company for its plants in Pittsburgh and Butler, Pa.

Some of the newspapers rejected the advertising on the ground that the automobile companies and other manufacturies in their own towns were so severely pressed for skilled workmen that to run the ads would be against the best interests of their cities.

The Standard Co. plants are working overtime. Carload shipments by express, and wholesale driveways from Standard factories, are common occurrences now.

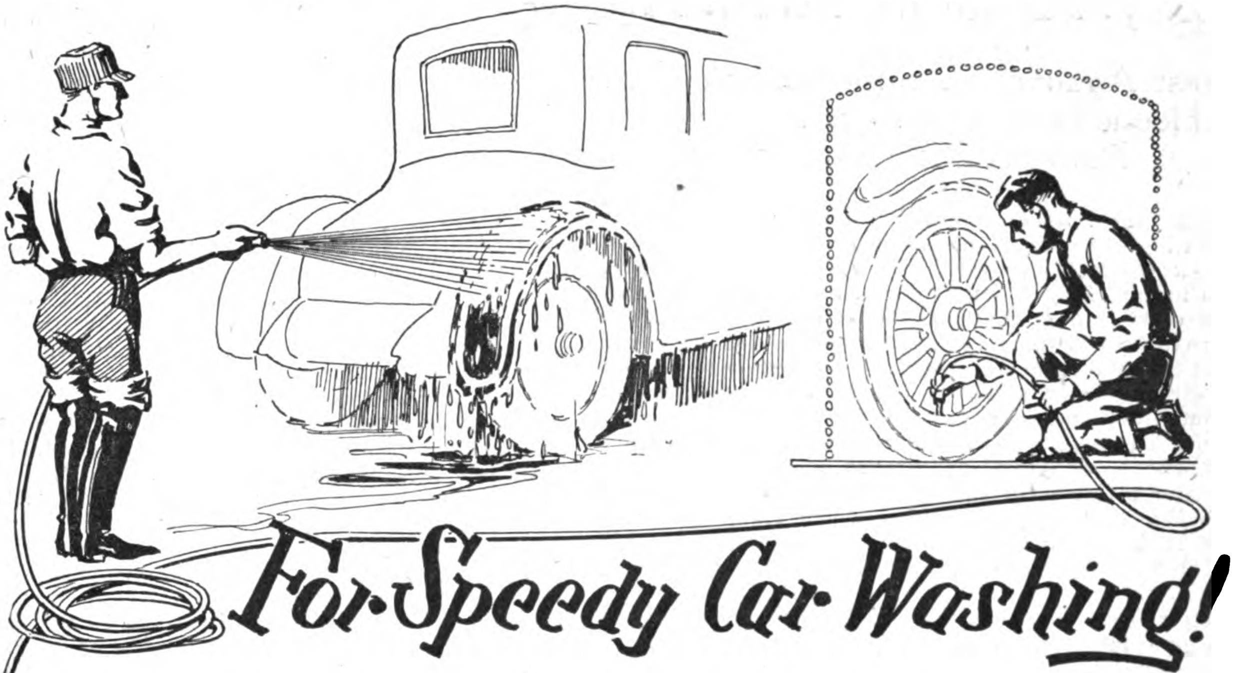
Three-Day Stutz Dealer Meeting

The 3 day dealer meeting held by Stutz Motor Car Company of America, Inc., on May 29, 30, and 31, at the factory in Indianapolis, proved one of the most significant gatherings in the history of the company and drew to it Stutz dealers from all over the United States and Canada.

Officials of the company arranged a program which included discussions of every phase of the business. Besides the executive sessions, the meeting included a banquet, and a trip to the Indianapolis Speedway to see the Memorial Day 500 mile race.

Since the previous gathering of Stutz dealers, the factory organization had been greatly augmented, and the recent meeting gave the dealers opportunity to meet the new department heads and discuss problems and plans. Consensus of opinion seemed to point to a vast improvement in business, directly traceable to the new Stutz product, which, according to the dealers, is creating widespread interest in every community represented.

If the other fellow can, you can, because to the other fellow you are the other fellow.


For Speedy Car Washing!

'H1'

LIBERTY
Water
Cooled
Hopper

as well as for filling high pressure tires

It isn't so much what the specifications of an Air Compressor are as what those who USE them Think, and Say! When prominent oil corporations, the government, big garages, and big manufacturing companies implicitly place their faith in, and rely on a certain type and make of Air Compressor—THAT is a good standard by which to measure your judgment.

LIBERTY Air Compressors are purely a Western product, designed and manufactured on the Western Coast.

GARAGES who must have a compressor which will at once give sufficient powerful air for washing cars, cleaning engines, filling tires, and for use in the vulcanizing shop can absolutely DEPEND, year-in-and-year-out, on the "H1 LIBERTY."

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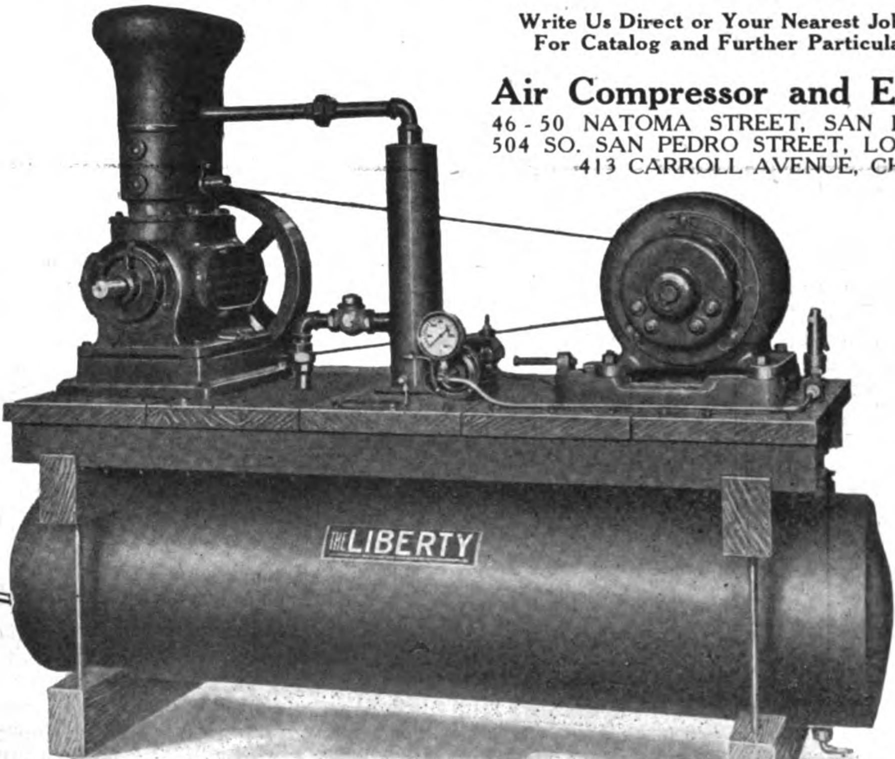


5 H.P. Motor
3 phase
18 x 72 Tank
200 lbs. pressure maintained.
25 cubic ft. capacity.
Automatic in Action.
Price—$550 f.o.b. San Francisco or Los Angeles.
Terms or 5% Discount for Cash.

Uxtry! About the A. A. A.

Protest Against "Commercialism" Not Heeded in Convention, So New National Body Formed

THE June 1 issue of Motor West contained an item stating that the American Automobile Association "seemed in for trouble." It was based on a report from Chicago, May 17, that representatives of 243 automobile clubs and more than 200,000 motorists had met there that day to launch a new national body of motor car owners, and had named a committee to select a name and temporary officers, pending the first convention. The item also stated the American Automobile Association's annual convention (which was held in St. Louis May 19-20, not May 22-23, as was stated) had broken up in a row.

No later information came as to the Chicago meeting held before the A. A. A. meeting, which certainly was a row at St. Louis; and a meeting is to be held in Chicago, June 19-20, to organize a new body in opposition to the A. A. A.

A letter from Raymond Beck, Columbus, O., chairman of the good roads board of Ohio State Automobile Association, says the new body is to be called American Motorists Association, the name having been given it at a meeting held in St. Louis by those who quit the A. A. A. convention. With Mr. Beck's letter came a printed statement of the insurgents' side of the row. In this statement the new body is called American Motor Association; and a mimeographed statement, source unknown, is like the other two, word for word, except that it names the new body National Automobile Association.

With the reasons for the May 17 insurgent meeting in Chicago unexplained, the fact is that at St. Louis, May 19-20, there was a breakaway and that those managing the new movement claim the fealty of clubs and associations representing 12 states and 243,000 individual members, the states being Ohio, Indiana, Illinois, Kentucky, New York, Minnesota, Texas, Nebraska, Missouri, Iowa, Dakota and Wisconsin.

One report of the St. Louis convention says the row began with the candidacy of Judge Walter D. Meals, of Cleveland, for the A. A. A. presidency. The insurgent statement is that it began when Judge Meals charged that the A. A. A. had been sold out to the Chicago Motor Club, "the principal feature of which is a proprietary insurance department." The statement says protests against seating 72 Chicago Motor Club delegates were disregarded, despite certain A. A. A. by-laws (printed verbatim in the statement) plainly indicating that clubs in the Chicago Motor Club's position, that is, not affiliated with a state body, are excluded from the A. A. A., and as explicitly forbidding accused delegates voting on their own cases. The protest was not permitted to be voiced in person before the credentials committee, and lost in the convention because the 72 Chicago Motor Club votes were allowed by President George C. Diehl. These, plus 25 from the St. Louis club, and 22 from all other sections, totaled 119 against the protest, which was supported by 89 votes.

The protest had set forth that Charles M. Hayes, president of Chicago Motor Club, is an insurance man; that that club (his, by inference) is soliciting members even outside of Illinois, in the Indiana state association's field; that Mr. Hayes is interested commercially in the plan to form A. A. A. geographical divisions regardless of state associations; that this idea and that of alleged commercializing of a number of routes to various parts of the country would hinder the interests and, according to the spirit implied in the A. A. A. laws, the rights, as well, of state associations affiliated with the A. A. A.

The individual insurgent statement of Mr. Beck, of Ohio, is quite detailed as to the alleged power of Mr. Hayes in the A. A. A., and as to his alleged commercialism. Mr. Beck makes the point that the divisional idea is wrong; that more than 90 per cent of legislative problems are those of the state, and that therefore the national organization should be based on state lines. That basis is indicated clearly in the A. A. A. by-laws.

The insurgent attitude appears to be that the A. A. A. regime is in a rut, self-centered, inefficient; that a "dominating hand," too commercial, is behind the divisional plan; and that the powers that be need opposition and publicity.

After the defection at St. Louis, the insurgent meeting there elected Fred H. Caley, of Cleveland, temporary chairman of the new body. The A. A. A. election resulted thus: President, George C. Diehl, Buffalo; secretary, Arthur Fifoot, Hartford, Conn.; treasurer, H. A. Bonnell, New York.

President Diehl has appointed Dai H. Lewis, of Buffalo, old timer, as acting chairman of the executive board, succeeding D. L. Morgan, who had been appointed after the death of A. G. Batchelder. From Washington headquarters Mr. Lewis sent Motor West a copy of A. A. A. resolutions adopted at St. Louis, referring to rights of way at intersections, gasoline prices, grade crossing accidents, etc., and a copy of the credentials committee's voluntary report on the row.

That report said the committee acted as it did because the Chicago Motor Club already had been admitted to the A.A.A. by the officers and executive committee, last March, as authorized by the by-laws; that the club had paid dues exceeding $7200, and had been invited to send 72 delegates to the convention; that the by-laws indicated the club was eligible to A. A. A. membership; and that the protests appeared vague, without proof, and not in good faith.

A. G. Batchelder's Memory Honored

On May 20 a tract of more than 10,000 acres on Baltusrol Mountain, near Summit, N. J., was named Batchelder Park, in honor of the memory of Amos G. Batchelder, who was executive committee chairman of American Automobile Association many years till his death by fall in an airplane at Moundsville, Md., May 20, 1921. His home was on Baltusrol. The families of F. Ed Spooner and of F. Eugene Spooner, his son, have a summer camp home there. There are no other residents on the mountain.

The dedicated land is mostly owned by W. G. Peckham, retired lawyer, of Westfield, N. J. The new park is traversed by two main roads and is visited by many people, from far and near, for the wonderful view, extending to New York's harbor. Its denizens include fox, opossum, raccoons, pheasants, partridge and quail.

"Flivverboobs," Says A. A. A.

Reckless and careless drivers of automobiles are to be known as "flivverboobs" according to the decision reached by the judges deciding the American Automobile Association's contest to pick a name describing the reckless driver in the same manner that "jay-walker" describes the careless pedestrian. The name was suggested by F. B. Simpson, of Cedar Rapids, Ia., who receives the A. A. A. $25 prize.

More than 10,000 names were submitted, from all sections. The judges were men prominent in the District of Columbia.

Kissel Motor Car Co. Bond Sale

May 31 it was announced an Eastern banking syndicate would sell, that day, $750,000 7½ per cent sinking fund 15 year gold bonds at par, issued by Kissel Motor Car Co., Hartford, Wis. Comment was that it was one of the first instances of new financing through bonds since depression hit the industry last year. The underwriter's circular said Kissel net earnings had averaged 3.3 times the maximum interest requirements of the bonds, for each year in a period of 7 years ending January 31, 1922.

Pilot Invades a New Field

Company Seeks Custom-Built Patronage with Six-Fifty Line Comprising Seven Stylish Models

A CUSTOM-BUILT line of cars has been presented by Pilot Motor Car Co., Richmond, Ind., in the new Six-Fifty models, which promise to be the most attractive ever offered by that organization.

As briefly announced a short time ago, differing considerably from its former policy, the company has invaded the $2000 field and is manufacturing a series of moderately priced custom-built cars, individual in design and exclusive in appointment. The new models include a 5 passenger touring car at $2000, a 2 passenger roadster at $2050, a 7 passenger touring at $2050, a 4 passenger sportster at $2100, a 4 passenger coupe at $2950, a 5 passenger sedan at $3000, and a 7 passenger sedan at $3150, f. o. b. Richmond, Ind.

The purchaser has the choice of five attractive body colors in Midnight blue, Burgundy maroon, Mist-O-Dawn grey, Biege brown and Rolls-Royce blue, with harmonious striping, together with wheels painted any color selected by the owner.

Hand-buffed Spanish leather, to harmonize with the color scheme of the exterior of the car, is used; shock absorbers, motometer, nickelplated bumper, radiator, starting crank cap, windshield side arms, are standard; and black enamel finish is substituted if desired.

The new models also carry barrel type headlights, with cowl lights to match, also polished aluminum side steps, aluminum trunk rack with protecting bars on back of body, and other custom-built features heretofore not used by the Pilot organization.

During the past few months the company has been unusually active in establishing factory branches in several of the larger cities in the country. These are working out very satisfactorily both as to merchandising and in supplying direct factory service to Pilot owners.

The months of May and June promise to be the greatest in the history of the Pilot organization, in viewing the number of cars that are being shipped from the factory. The factory branches and distributors are unusually active in selling the new Pilot Six-Fifty series, and the success of the Pilot organization's invasion of the custom-built field with so complete a line is believed to be assured.

Proving That It Pays to Pause

A nationwide Care at Crossings campaign by the American Railway Association began June 1 and will last 4 months. Colored posters, graphically showing motorists the dangers of carelessness in crossing railroad tracks are being distributed by the Southern Pacific and other Western railroads.

This campaign is similar to the No Accident campaign conducted by the railroads last year, and which showed a remarkable decrease in grade crossing accidents, proving, apparently, that they are largely due to carelessness of drivers. At grade crossings on the Southern Pacific, in the 4 years ending December 31, 1921, 2755 automobiles were damaged or destroyed, 208 persons were killed and 921 injured. A railroad man comments on this:

"If 208 people were killed and 921 injured in a railroad accident, it would be appalling to everyone. It is no less appalling when this aggregate is attained by compounding periodical results."

New Interests in Mercer Motors

A large interest in Mercer Motors Co., Trenton, N. J., has been acquired by Smith & Gallatin and associates, of New York. George P. Smith has been elected a director in the company and will represent these interests.

A special committee of Mercer directors has been appointed to confer with the new interests in regard to strengthening the position of Mercer. This committee consists of former Governor Stokes, of New Jersey; Walter G. Kimball, vice president of Columbia Trust Co.; and John Davis, vice president of Liberty Industrial Corp. A. J. Drefs, vice president of McQuay-Norris Mfg. Co., St. Louis, and who is widely known in the automotive industry, is associated with the new investors and will take an active advisory part in Mercer affairs.

National Merger Plan Waits

Stockholders of National Motor Car & Vehicle Corp., Indianapolis, decided at a special meeting at the corporate office in New York to refer back to the directors, for further investigation, the proposal to merge with Associated Motor Industries. Another special meeting will be called later to determine what shall be done. The proposition submitted to the stockholders was either to accept the offer of Associated Motor Industries for the assets of the corporation upon the basis of an exchange of securities or, as an alternative, the sale of all the property and assets of the corporation. It is understood some of the creditors of the National are opposed to the consolidation.

Basis of Ford-Leland Rumors

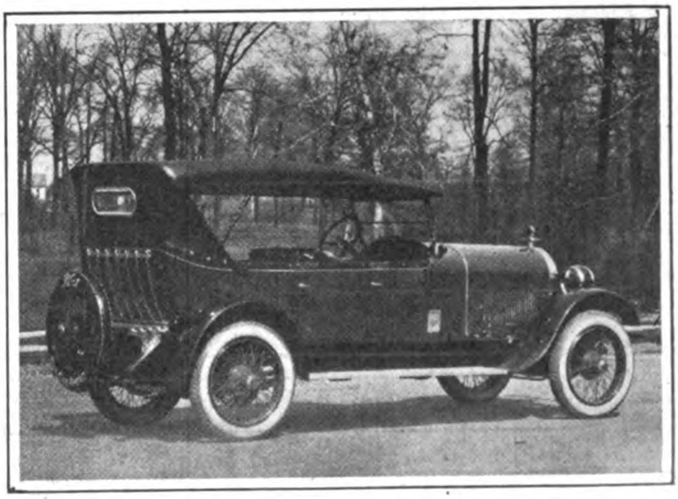
Persistent rumors of a breach between the Ford and Leland interest in Lincoln Motor Co., Detroit, and of resultant sweeping changes, such as the resignation of Henry M. Leland and Wilfred C. Leland, and a general shakeup, are said to be without foundation. H. H. Emmons, attorney in Lincoln Co. matters, declares that the Lelands have not resigned, and that only adjustments such as naturally followed the acquisition of the big Lincoln plant by the Fords have been made and still are being made, but that no major changes in the organization have occurred.

Horseshoe Tire Reorganization

Reorganization of Racine Auto Tire Co., Racine, Wis., making Horseshoe tires, is being effected through incorporation of a new concern, Racine Horseshoe Tire Co. The plan calls for the formation of two new concerns, one a holding company and the other an operating company. The former will hold the entire capital stock of the other.

Kelsey to Make New Disc Wheel

Kelsey Wheel Co., Detroit, is about to launch production on a new steel disc wheel, it is reported. The wheel will be made in various sizes with production concentrated on popular sizes.



NEW CUSTOM-BUILT 5 PASSENGER PILOT TOURING CAR.

Some Indianapolis Gossip

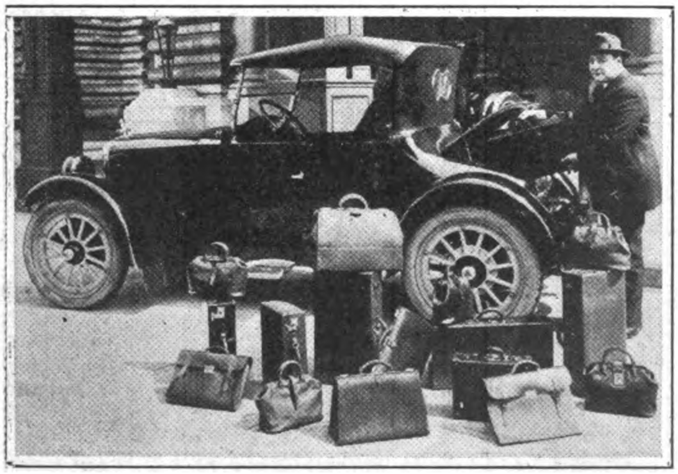
Remarks On, Of and About the Greatest Annual Automobile Event of All Though Not the Fastest

NO matter how important any thing or event, such as the tenth annual 500 mile race run on Memorial Day, May 30, on the 2½ mile brick speedway at Indianapolis, may be mechanically, usually it also demonstrates the far greater importance, all angles considered, of what is meant by "a level head."

Newspapers all over the country were wired that Murphy, who won the race, had broken all records for the distance. Later in the day the actual fact went forth. As stated in Motor West on June 1, the fastest average for the distance, 97.58 miles per hour, was by Dario Resta, in a Peugeot, in Chicago, June 26, 1915. Murphy's average, 94.48, broke the record for the Indianapolis track, 89.84, which had been held by De Palma since 1915, when he made it in a Mercedes.

Undoubtedly the best men conveniently available were pressed into service at Indianapolis, as starter, timers, scorers, umpires, judges, pit men, etc. They were tested, without a doubt, as severely as any motor in the race; and if one or more of them did not continuously and with absolute accuracy "hit on all cylinders" throughout,—lawsy! Nobody who has the faintest conception of what the work is, would blame them. The slip as to the kind of record that had been broken, and the slip by which at first Murphy was credited with having led all through, both were quite natural, in view of the high pressure. It's a wonder no more slips occurred.

Some men seem to be endowed with accuracy of vision, and the kind of mind behind the eyes, or ears, or both, that transmits to paper practically unerringly what is seen, heard, or both; and the very important and highly interesting fact that such a trial as a long, swift automobile race between numerous contestants demonstrates, is that a few—a very few—men have this endowment to a phenomenal degree. The Pacific Coast has such a man—P. C. Pommer, scorer extraordinary. All the devices invented or inventable probably never will be quite equal to such men in tasks such as scoring. Whether the Indianapolis results happily were checked so quickly that the contestants were handed their prize moneys the evening or day after the race, with full assurance that no mistake was being made, this writer does not know; but the chances are that if Pommer had been there, it certainly could have been done.



CLEVELAND SIX ROADSTER, POPULAR BUSINESS CAR.

Pre-eminently the young people's car, the new Cleveland Six roadster, manufactured by Cleveland Automobile Co., is becoming very popular among service corporation managers, salesmen and others who have much occasion to travel far, often with cumbersome baggage. The picture indicates the ample storage capacity of the new car—sufficient for all the luggage shown, the outfit of a leather goods salesman. The compartment in this car is notable in being accessible not only from the rear deck but also through an opening guarded by a lock, directly behind the driver's seat.

The June 1 issue printed the report that the first five of the ten who finished in the money at Indianapolis, May 30, broke the track record. Only four did. Murphy's time was 5:17:30.78. Hartz, second, finished in 5:20:34.59; and so on. Murphy broke the track record by 16 minutes. As to leading, he was in front to the 74th lap; Duray led at 75 laps; then Hartz did, through the 83d; then De Palma to the 86th; Hartz again into the 121st. Then Murphy regained the lead and kept it. As told before, Murphy made three stops in all.

The smaller the motor, if intelligently developed, the more speed. In proof of this Albert Champion, president of AC Spark Plug Co., Flint, Mich., points to Indianapolis history as shown by the following table. It does not include 1917-18, the war years, when there was no racing:

Year	Piston Displ. cu. in.	Winner	M.P.H.
1911	600	Harroun	74.59
1912	600	Dawson	78.72
1913	450	Goux	76.92
1914	450	Thomas	82.47
1915	300	DePalma	89.94
1916	300	Resta	83.26
1919	300	Wilcox	88.06
1920	183	Chevrolet	88.50
1921	183	Milton	89.62
1922	183	Murphy	94.48

Each year cars are simpler, more compact; the engines, too. Murphy's, says Mr. Champion, is the smallest Indianapolis winner yet. Not only the chassis and motor—every point in design and equipment has been developed, refined, remarkably. Take tires—in the first race, in 1911, more than 100 changes were made. De Palma, who finished sixth, made ten. Wilcox, who was running at the finish, burned up 13; but in 1920 Gaston Chevrolet, averaging 88.5 miles per hour for the 500 miles, won on the same rubber on which he started.

As to spark plugs, Murphy in this race had eight AC plugs capable of delivering a total of about 4,000,000 explosions during the 5 hours 17½ minutes. "Frankly," says Mr. Champion, "I hate to think how our plugs would have fared 12 years ago, if the engines then had turned up more than 3000 r. p. m., as Murphy's did on Memorial Day."

After the race was over, in a compilation showing various men's standing in the A. A. A. championship contest for points, Milton's standing was omitted. It had been arranged that the five leaders in the list would go to Uniontown for the race there on June 17, and Milton is one of the five. The remainder on the list were "released," so to speak, to contest at San Carlos, June 14, if they wished. Uniontown for years has had the priority privilege, after the Indianapolis race, and though the San Carlos event was sanctioned by the A. A. A., it was not awarded any points, so that till it is changed by what happens at Uniontown June 17, the point list, verified by the A. A. contest board to Manager Young of the Los Angeles speedway is as follows:

Jimmy Murphy, 2050; Harry Hartz, 1200; Tommy Milton, 680; Frank Elliott, 375; Eddie Hearne (not racing now), 320; Pietro Bordino, 195; Ralph De Palma, 155; Roscoe Sarles, 140; Art Klein, 127; Joe Thomas, 112; Jerry Wanderlich, 103; Ora Halbe, 90; I. P. Fetterman, 50; Ira Vail, 40; Tom Alley, 35; Peted De Paolo, 28; Eddie Miller, 25.

Hand it to Steve Hannagan, director of publicity for the Indianapolis event. What he sent out was a plenty, numerically and in quantity per; but it was remarkably good, human stuff, such as should, and did, get the approval of newspaper copy desk slaves all over the country. The annual Indianapolis event is the world's greatest, if not the fastest; and Hannagan does a very great deal to get for it its due.

The English cars did not fare well. Hawkes, in a Bentley, was about 30 miles behind the last to finish. Douglas, of London, also in an English car, though far outclassed, won admiration by his British grit and patience. By keeping on he proved both he and his machine had endurance, at least.

Nine of the first ten men to finish used straight-eight motors—and only one of the ten used a 4 cylinder motor. In all cars, 183 cubic inch displacement was the limit. Next year it will be 122, or 2 liters.

Capt. Eddie V. Rickenbacker had the onerous job of starter. He did his flag waving from a suspension bridge which swung high over the homestretch.

Barney Oldfield, as usual, did the pacing at the outset, at about 70 per; and most of the winners used Oldfield tires.

Light on Milton Car Suspension

There has been much speculation as to why the American Automobile Association suspended the special car piloted until recently by Tommy Milton. The following, partly unofficial, is not vouched for by Motor West but is printed for its news value.

On April 5 an advertisement appeared in the Chicago Tribune. It is stated this was by a Chicago dealer, and that it claimed Milton's victories were being won in a Durant Six. The suspension of Milton's car, owned by R. C. Durant of California, followed. Comment on the far-fetched aspect of that action already has been made in Motor West; but it appears that, without any very definite warrant in its book of rules, the A. A. A. assumes the right to take such action and had done so in previous casse, to keep the sport clean and indirectly the trade.

It appears that whatever dealings Milton may have had with the Fresno track management, as to compensation, in connection with its April 27 meet, did not result in protest from Fresno to the A. A. A. and had nothing to do with the suspension of Milton's car, previous to the meet.

On May 3, in New York, the A. A. A. contest board agreed to lift the suspension on publication of a retraction of the Chicago Tribune advertisement (the retraction was printed), but that the suspended car would be reinstated only as a Durant-Miller special.

Since then, Motor West is informed, the board nevertheless released the car temporarily for the race at Indianapolis, where it was entered by R. C. Durant as a Durant, to be piloted by himself. Milton entered another car, unnamed at that writing, equipped with a straight-eight motor built by Harry A. Miller, vice president of Leach Motor Car Co., Los Angeles, who also built the motor in R. C. Durant's car.

It is understood the A. A. A. board intended to again consider disposition of the status of the car released for R. C. Durant's use at Indianapolis, at the time of the Indianapolis race or immediately thereafter.

Facts and Figures of the Industry

The National Automobile Chamber of Commerce has issued its 1922 compilation, in a 96-page booklet, of facts and figures of the automobile industry. The figures are those of 1921, when the total registration of cars and trucks reached 10,448,000, a gain of 13 per cent over 1920. The valuation chapters cover a wide range of information, among the subjects being general statistics, production, fuel, raw materials, occupational use of cars, safety statistics, motor camping, cars and trucks on farms, motor truck uses, highways, registration, exports and imports, legislation, state fees, automotive associations, automotive schools, organization and membership of the N. A. A. C.

Gardner Has Good Distributors

The quality of a car may be judged in several ways. One is, its distributors. By that criterion the Gardner car, made by Gardner Motor Car Co., St. Louis, is a good car.

The spunk of President Russell E. Gardner, in the face of a considerable deficit due to the depression, has been told about before. Mr. Gardner believes in his product. His service standards have been making a good record for 50 years. He applied them to motor car building, and they are making and keeping friends.

The company has a sort of river-barge cinch on the lower Mississippi River region—its plant is on the shore and it saves much in shipping by water; but the Gardner is making its way in other sections where it has no such advantage.

One Gardner distributor of prominence is the Sidney B. Bowman Automobile Co., New York, which took the line recently. Mr. Bowman is one of the most successful distributors in the metropolis. He has been in the business more than 30 years. He began the wheel life on a bicycle; was a factor to reckon with on the cycling track; and, incidentally, was, and presumably still is, a vegetarian. At hotel and training tables, when other racing men gorged on "nourishing" grub, such as heaps of mutton chops, eggs, etc., Sid got along on the side dishes, and got along well; always had good weight and plenty of get-there.

In the Pacific Northwest a pioneer distributor, Mitchell, Lewis & Staver, with houses in Portland, Seattle and Spokane, took on the Gardner recently. This firm is 40 years old.

In the Dallas, Tex., field, the distributor is Safford & Frey, Inc. Both Don Safford and Jerry Frey are well known automobile men, who have put over some big deals in the South.

L. Mansfield, Inc., successful automobile men of Fort Dodge, are an aggressive addition to the Gardner system of distribution.

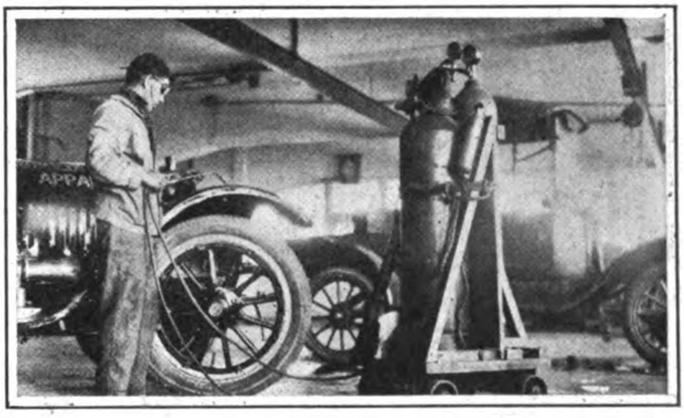
In Kansas City, the Tri-State Motor Co. headed by J. B. Mura, is making this new connection a valuable franchise, as Gardner sales in that territory are increasing steadily.

Coal Field Men Flock to Detroit

Howard E. Coffin, secretary of the Detroit section of Society of Automotive Engineers, says the city is being flooded with workers from the coal fields, on account of the coal strike, and that they bring tools and claim to be skilled mechanics.

How Ask 'Em to Buy Plan Works

An Ohio jobber salesman "sold" the Ask 'Em to Buy idea so thoroughly to one dealer that the dealer's sales jumped from $509 in December to $1300 in January and $2000 in February.



PORTABLE WELDING EQUIPMENT AND FIRE EXTINGUISHER.
This portable welding equipment in a San Francisco shop carries a fire extinguisher, for use if, while welding, a fire is started. Like many another good idea, this one was the result of a fire which occurred for lack of it.

New Type of Auburn Sedan

Absence of Rumbling, Clever Door Lock and Fine Fittings, Outstanding Features of Offering

AUBURN AUTOMOBILE CO., Auburn, Ind., notable for the quality of its product and for having done a quietly profitable business in consequence, during the recent depression, is in production on a new series of sedan bodies. This new type of body is mounted on the regular Auburn chassis. A wide moulding runs completely around the body and a smaller moulding goes up behind the rear window to the top.

One of the most attractive features is the color scheme. The rugs, curtains and upholstering of the interior correspond to the exterior finish of the body, in either the blue or the maroon.

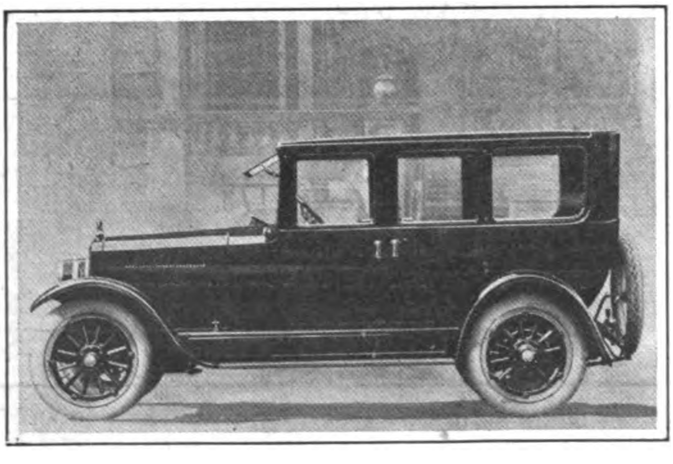
An improved windshield has been introduced in this car. The lower glass is stationary and the upper glass is movable, with a ground glass visor which can be fastened securely in any position. The upper glass also has a weather proof joint at each end, preventing water entering when the glass is closed. A moulded rubber is placed between the two glasses.

The roof of the new body is so constructed that the usual rumbling of closed cars is avoided, and the interior of this is fitted as finely as the best room in any home. The upholstering, made specially for Auburns, is of all wool cloth with fast colors in blue or maroon. The rugs and curtains are of high class material. Door handles, window lifts, curtain rollers, etc., are all in platinum finish with the special Auburn design. A coat hook is placed conveniently in each corner of the rear tonneau. The dome light, in the center of the ceiling, is operated by either of two switches, one being connected with a button in the right rear door jamb, so the light can be switched on to light automatically when the door is opened. The finish of the window trim and instrument board is natural mahogany. A nickeled weather strip, padded with felt, prevents water entering the interior of the door, or body.

What are believed to probably be the most uptodate and convenient auxiliary seat is in this new body. These seats face forward and provide a very convenient sitting position, with well padded cushions and easy backs. These seats, when not in use, may be folded into the back part of the front seat and a flap fastens down over them, which gives a very neat appearance.

A small package compartment is conveniently located in the back of the front seat.

To provide security for packages and other valuables left in the car, an inside locking device is being used. The two doors on the left side and the rear door on the right side have individual locks, operated by a small button on the top of the inside door handles. When the door closes it is locked securely against outside entrance by simply pushing this button down. Unlocking is by turning the inside lever lock part way around, enough to release the lock. The right front door has a Yale lock, and is not attached to the locking device. The inside lever lock is a rotary type.



THE NEW TYPE AUBURN BEAUTY-SIX SEDAN.

The Girl with the Diamond Eyes

Two fair women were welcomed to Motor West office recently, not only because of a letter of introduction from E. C. Tibbitts, manager of Wm. H. Rankin Co.'s central district office in Chicago, but because of their own sheer merit, set forth in striking but delicate tints by Artist Hamilton King. One may well be called the Girl with the Diamond Eyes. From a pink pastel complexion, on a background of blue, her wondrous orbs shine upon and soften the suffering of the daily grind. She and her piquant companion will be with us long after the calendars they adorn are out of date. A splendid advertisement for the new Diamond cord tire.

Mosler Rumors Set at Rest

On May 22 last, the firm of A. R. Mosler & Co., New York, which had been in receivers' hands about 20 months, was taken over by Mosler Metal Products Corp., a new organization headed by prominent Eastern financiers. To a complete line of spark plugs, which the former company made, will be added a number of accessory lines and full radio line. H. W. Fischer, sales manager, made this announcement recently to set at rest various rumors. Details of the reorganization and personnel are to be made public soon.

Lelands Said to Have Left Lincoln

Detroit news, June 13, was that the Leland family had given up all connection with and interest in Lincoln Motor Co., and also that management of the business had been transferred to the executives of Henry Ford, who bought the company's property for $8,000,000 at auction in February. There have been rumors for some weeks, of differences of opinions as to how the business should be run.

Recent Increases in Car Prices

Earl Motors, Inc., has made the f. o. b. price of its touring car $1095, a raise of $100.

Lincoln Motor Co. has given notice recently of a $500 raise in its touring model price, to $3800. A new limousine, at $7000, is rumored. All Lincoln bodies now are to be of aluminum.

Congress Probing Gasoline Prices

Congress is probing again—gasoline prices, this time. A cent a gallon each time, four times within a few weeks, despite tremendous stocks, seemed raising too much, so Congress is going to raise Cain about it; with the usual result, presumably.

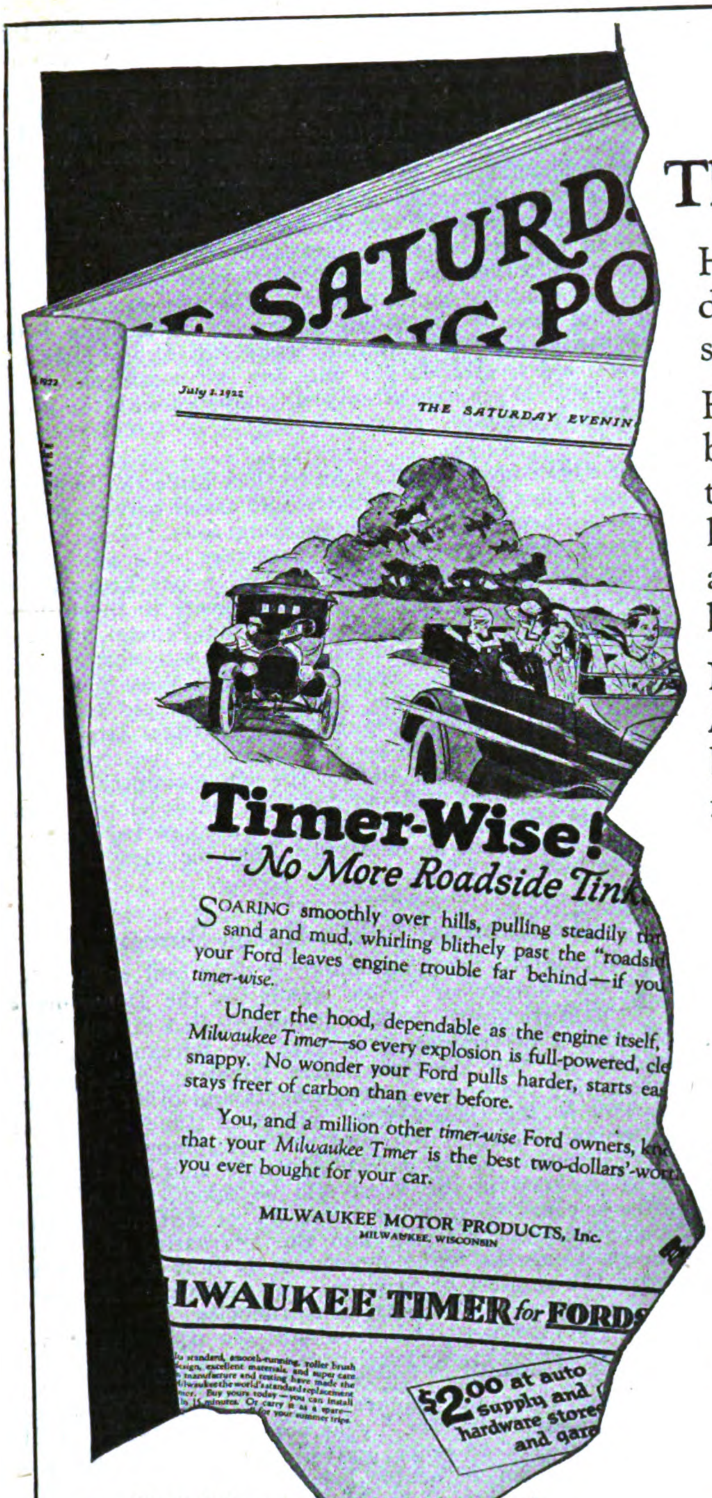
Gardner Hits Unwarranted Profits

Gardner Motor Car Co., St. Louis, recently told its distributors and dealers it had received complaints from buyers against extra charges, constituting unwarranted profits; and that the company thoroughly disapproves of such practices.

Reeves Gives Automobile-Radio Talk

On June 10, Alfred Reeves, general manager of National Automobile Chamber of Commerce, spoke to the world by radio on the automobile and the radio as future allies.

Labor troubles in Akron are subsiding. Firestone recently increased wages 10 per cent and Goodrich workers, who had asked 80 cents an hour, accepted 77½.



SATURD
NG PO

July 1, 1922 THE SATURDAY EVENIN

Timer-Wise!
—No More Roadside Tink

SOARING smoothly over hills, pulling steadily thr sand and mud, whirling blithely past the "roadsi your Ford leaves engine trouble far behind—if you *timer-wise.*

Under the hood, dependable as the engine itself, *Milwaukee Timer*—so every explosion is full-powered, cle snappy. No wonder your Ford pulls harder, starts ea stays freer of carbon than ever before.

You, and a million other *timer-wise* Ford owners, kn that your *Milwaukee Timer* is the best two-dollars'-wor you ever bought for your car.

MILWAUKEE MOTOR PRODUCTS, Inc.
MILWAUKEE, WISCONSIN

LWAUKEE TIMER *for* FORDS

$2.00 at auto supply and hardware store and gara

See this Full-Page in the Post, July 1st.

More Help for

The Timer-Wise Dealer

He specializes—a Timer-Wise Dealer does—on timers, as he does on tires, spark plugs, and other classes of goods.

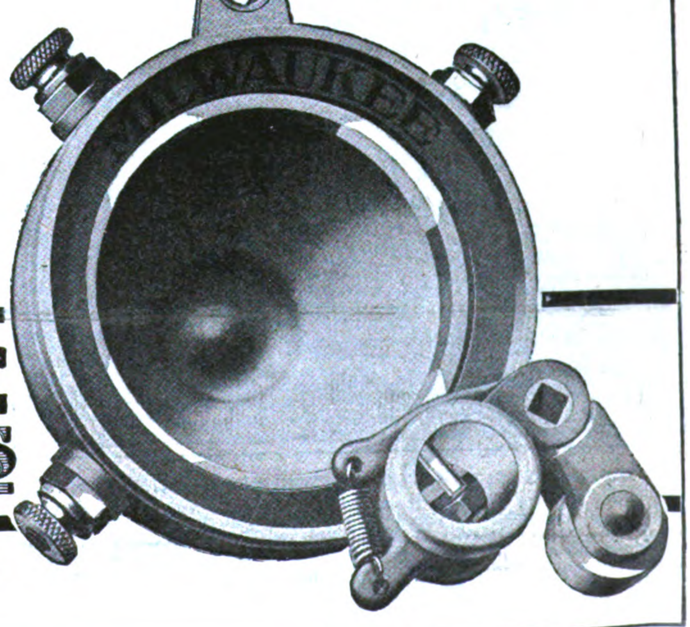
He features just one timer (he doesn't believe in competing with himself)—a timer that his trade knows; one that's liberally advertised, a standard value at a standard price; one that he doesn't have to "explain" to a customer.

Nine times out of ten, his timer is the ***Milwaukee***—and he has a real business built on it. Quick turnovers—never much money tied up!

If YOU are Timer-Wise, you benefit by Milwaukee Timer advertising. We're running a full-page in the July 1st Saturday Evening Post. Display it in your window—with a Display Stand and perhaps a stack of Milwaukee Timer cartons. "Ask 'em to Buy". Remember, a lot of Posts come into your town. Make 'em work for you!

MILWAUKEE MOTOR PRODUCTS, INC.
MILWAUKEE WISCONSIN

Retail Price $2.00



MILWAUKEE TIMER *for* FORDS

Famous wherever Fords are driven. Over 1,000,000 in use. Timer-Wise dealers stock no other.

Highway Matters

Federal Legislation Deadlocked

WERE the managers or directors of a large private enterprise to waste time on important projects, especially in financing them, as Congressmen do in committees and in general sessions, these enterprises would go to pot. If the gentlemen in the private business framed their propositions with as much ignorance of essential points as members of Congress often do in framing bills, they would be "fired" quickly.

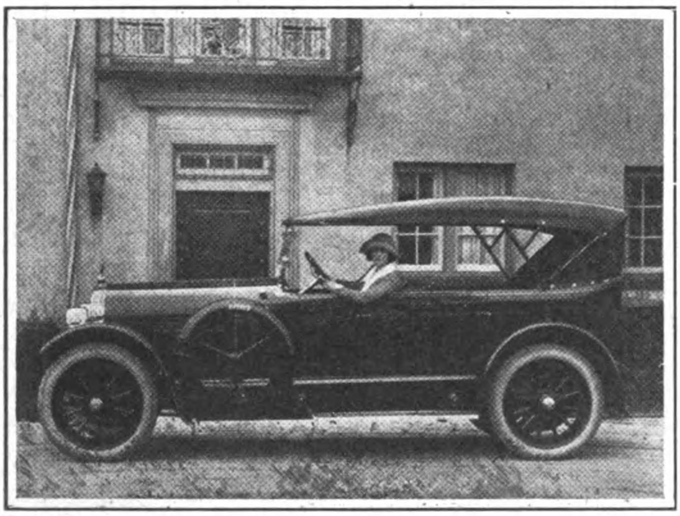
That deep ignorance of some vital factors in the awarding of Federal road aid exists in the bill introduced by Representative Dunn, of New York—and which was passed by the House almost unanimously!—is obvious to all who are fairly familiar with those factors. The Dunn bill is not acceptable to the Senate, which favors simply voting sufficient funds with which to continue the present Federal aid. News from the national capital on May 31 was that the Senate and House conferees locked horns on that day, without progress, the Senators insisting on their appropriation rider to the current Post Office bill.

Why, readers may ask, give the Post Office Department funds to give to the Department of Agriculture for its Bureau of Public Roads, administering Federal road aid? That is another story of Congressional mental processes. Directly or roundabout, if we can only get the money! The point now is, legislation to continue Federal road aid in 1923 and later years is being delayed, endangering highway work of the greatest importance if the commerce of the country is to go on.

The thing has been milling around in the House and Senate the past three months, despite the fact, pointed out by C. C. Cottrell, manager of California State Automobile Association's good roads bureau, that of the $340,000,000 heretofore appropriated for Federal aid, only about $60,000,000 will remain available after July 1 next. It is vitally necessary that additional funds be provided for now, if there is to be sufficient for another year.

Analysis of the Dunn bill reveals some very good points. One, which appears to have been overlooked when the present act was in debate, provides for railroad grade separations, which means more safety in travel; but the bill has very bad points, no doubt the result of half-baked consideration, and its appropriation features will not do. It would go far toward annulling the provision in the present Federal aid act relieving states in the Far West from having to match Federal aid 50-50. That relief was in recognition of the fact that Federal holding of vast areas in Western states, prevents their development populatively and otherwise, hence hinders their prosperity and increases their per capita burdens. The present partial relief from this, by the sliding scale plan of meeting Federal road aid, the Dunn bill would attack by limiting Federal aid to $12,500 per mile for the fiscal year 1923, and to $10,000 per mile afterward, compared with the present $20,000 per mile.

The Dunn idea is said to be to thus force the building of more miles of roads. That would mean narrow roads, which are becoming increasingly dangerous. Wide roads, in many cases, are absolutely necessary. To get them, Western states would have to pay more per Federal aid dollar received. These states would revert to the unfortunate position they were in before the Federal aid act, notably through Mr. Cottrell's efforts, was changed to lighten their burdens. States in the Far West have enjoyed the graduated scale plan of Federal aid only six months, and have only begun to put in effect large road programs made possible by it. Naturally, Western leaders, for their own states and for the whole country (which of course is helped in living costs by the development of the West) are urging all to partake in a concerted demand that the Dunn bill be defeated. That includes, East or West, all who read this.



NEW HAYNES 75 SEVEN PASSENGER TOURING CAR.

The new, improved Haynes 75 touring car seats seven passengers comfortably. Two auxiliary chairs fold into recesses in the rear of the front seat. An extra tire carrier is mounted on each side at the front. The searchlight design head lamps, the exterior side cowl lights, and the fashionable three-quarter-length running board, lend distinction and charm to this completely equipped touring car. There is a trunk at the rear. The back of the body is protected by six ornamental protection bars. The body-conforming seats are upholstered in genuine leather. Wheel base is 132 inches.

To Lambast Public Roads Bureau

ALLEGING arrogant, unfair actions and rulings by the Bureau of Public Roads, in the Department of Agriculture, which administers Federal road aid, and with a determination to give the bureau a drastic cleaning up, the Western States Highway Association, representing the highway departments and other highway interests in the Great West, will meet June 20 at the Multnomah Hotel in Portland. A full stenographic record of instances of the bureau's attitude, said to be harmful to progress in the West will be taken, and a committee selected to visit the Secretary of Agriculture and demand reforms, offering him the alternative of action through Congress. The movement is fully expected to receive the support of Senators and Representatives sent to Washington by Western constituencies.

Cost of Various Road Types

Average costs per square yard of various types of country roads during the 5 year period from 1916 to 1921 were: Sand clay, 18 cents; gravel, 46 cents; plain surface treated macadam, 95 cents; bituminous macadam, $2.10; bituminous concrete, $2.50; plain cement concrete, $2.57; reinforced cement concrete, $2.74; brick $4.10.

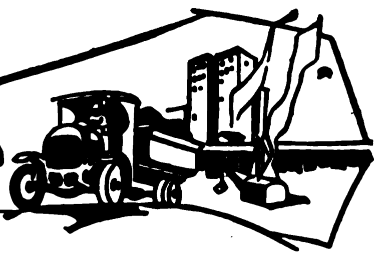
A Million Roadbuilding Workers

Highway construction in the United States now is one of the nation's largest industries. An army of more than 1,000,000 men labored last year throughout the roadbuilding season, in making and repairing highways.

It is said a mile of hard surfaced road is being laid in Oklahoma each working day. More than 1000 cars of stone and gravel are being used monthly and most of this originates in Oklahoma.

When the Panama Canal was being built, donkeys stumbled and bullock cars lumbered over Panama's cobbled roadways. Now trolley cars and asphalt roads radiate in all directions.

The Car of Commerce



State Draymen's Body Meets

California Truck Owner Organization Leaders Go Up Into the High Hills for a Pow-Wow

ON May 29, at The Pines, high up in the Sierras, 55 miles northeast of Fresno, there occurred an informal California State Draymen's Association meeting. This is the old-established truck owners' organization, and is understood to be saying frankly, informally, that, judged by their works so far, the newer body, California Transport Association, headquarters Fresno, has no visibly good reason for existence.

At The Pines, according to W. A. Otis, of Western Drayman and Warehouseman, San Francisco, very excellent official organ of the Draymen's Association, "the dying light of Mr. Mott's association did not come in for any great amount of conversation, it being thought that it was better to let the dead past bury its dead." Mr. Mott is secretary-manager of the newer body, which is sending out much quite readable matter to newspapers and which matter, the opponents charge—informally, always—has no purpose more definite than to help the newer body's membership-getting campaign and, as a natural sequence, assure the income of the secretary-manager, advisor and perhaps other officials who are said to be drawing considerable salaries.

All of which is stated informatively, without bias, by Motor West. It should also be stated that in the matter of truck weight legislation, members of the Draymen's Association consider the other's printed generalities, speaking for fairness, inconsistent with apparently favoring legislation which would be destructive to truck commerce.

At The Pines an interesting general talk on truck subjects was delivered by J. X. Calvin, president of the National Teamsters' and Truck Owners' Association. He said members should not "kid" themselves; should know and, knowing, should "put the cards on the table and fight for those things which honestly can be claimed as a right."

Fank L. Allen, president of Truck Owners' Association of Southern California, also spoke. He said the state association deserved strong support and would get it from his organization.

Legislative matters were left in the legislative committee's hands, but the meeting expressed a desire to be constructive in motive and action.

That the newer association's publicity work has made an impression upon its older—er—brother, was shown by appointment of Phil Jacobson, secretary-manager of the Los Angeles body, as chairman of a publicity committee, he to choose four associates.

Plans to increase membership were discussed. Special salesmen may be employed. These work on commission. Local secretaries are to be encouraged by being paid commissions also, if they will accept them.

A committee will revise the by-laws and report at the annual convention, to be held in Stockton in November.

A very heartfelt discussion was on franchise carriers who make store door pickup and delivery between fixed terminals at much less than the combined cost of drayage at either end plus railroad transportation. The point was made that this practice not only hurts others in the business locally, but makes railroad interests wrathful and, above all, is unprofitable to those who practice it. One case was cited in which the charge was more than 33 per cent less than it would have been by local drayage and railway.

Moreland Truck Plant Is Humming

Moreland Motor Truck Co., which began 11 years ago, is doing very well, thank you. In the week ending June 10 its plant at Burbank, near Los Angeles, working at top speed on an 8 hour shift, completed 27 trucks—1 hour 46 minutes per truck. It is hoped to be producing 150 trucks per month, very soon. Popularity of the product is shown by the number of "repeats." Re-orders are coming in good volume, notably from large oil companies.

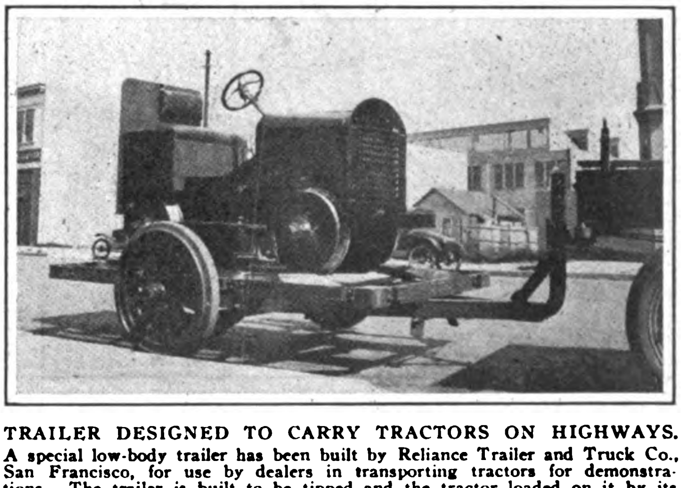
State Bars Bootleg Trucks

What is believed to be a decisive blow at the bootlegging industry in Pennsylvania is a mandate by the state prohibition director that all liquor shipments must be made either by freight or express. Transportation by motor trucks is taboo under this ruling, and they violate the law no matter whether the liquor is properly secured under legal permits or otherwise.

There Are 1500 Motor Express Lines

There are 984 motor express lines in the United States which have been listed by the National Automobile Chamber of Commerce. The total number of motor express lines in the United States is estimated at 1500. The tendency each year is toward consolidation, with fewer lines doing a larger business.

Lem Loosehead says: Engineers are perfectin' automotive rail cars. Fine 'n dandy—but some o' them perfected cars 'll look awful funny a few years f'm now.



TRAILER DESIGNED TO CARRY TRACTORS ON HIGHWAYS. A special low-body trailer has been built by Reliance Trailer and Truck Co., San Francisco, for use by dealers in transporting tractors for demonstrations. The trailer is built to be tipped and the tractor loaded on it by its own power. After the tractor is run onto the trailer it tips automatically down to the position shown in the picture, and locks itself in this position. The trailer can be hitched to a passenger car, and the tractor transported along the highway. The state law does not permit tractors to be run over the highways unless the grouters are removel, which in some types of tractors requires considerable time. By means of this trailer it is not necessary to remove the grouters.

Huge Truck Interests Merge

Selden and Atlas First Units in New Corporation Formed to Reduce Costs, Improve Sales

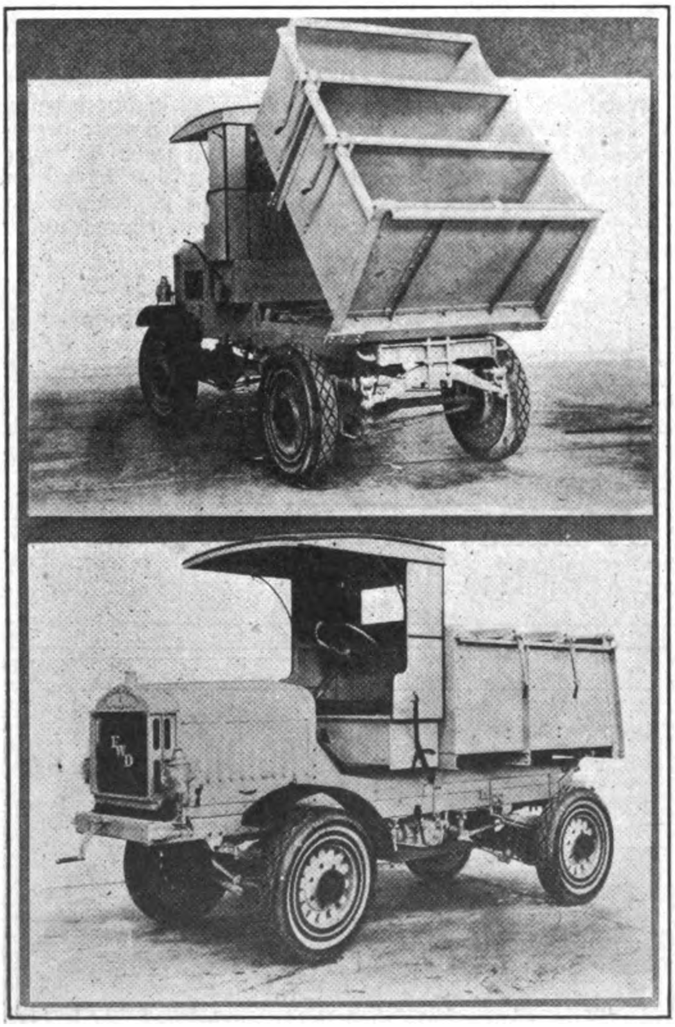
ACTION of far reaching significance in the motor truck industry is involved in the formation of Industrial Motors Corp. under the laws of Delaware, announced last week. The new corporation is a holding company with an authorized capital of 1,000,000 shares of no par value, all of one class. The announced purpose is to acquire and hold the stocks, securities and properties of motor vehicle and accessory manufacturing and selling corporations and to manufacture and sell motor vehicles and accessories.

The first two units included in the new corporation are Selden Truck Corp., Rochester, N. Y., and Atlas Truck Corp., York, Pa. Both of these companies occupy an important and commanding position in the truck industry. Their business, as stated by their officers, has shown steady improvement during the past few months.

It is expected by the officers of the new corporation that other important units will be acquired soon. The ultimate plans include bringing together the strength and co-operation of some of the principal manufacturers engaged in motor truck construction, thus providing means and methods of effecting economies in purchasing raw materials and supplies, lowering production cost and greatly increasing efficiency in manufacturing, merchandising and distribution.

The great distributing economies which the plans of the new corporation will make possible are expected to offer advantages in service to truck purchasers and to increase the dealer's opportunities for better profits through more efficient selling.

The organization of Industrial Motors Corp. is under the direction of a committee which includes John J. Watson, Jr., of New York, vice president and treasurer of International Agricultural Corp., and president of Lee Tire and Rubber Co.; Frederick M. Small, president of Martin-Parry Co., York, Pa., and Indianapolis, Ind.; Reeve Schley, vice president of Chase National Bank, New York City; George C. Gordon, president, and Robert H. Salmons, vice president of Selden Truck Corp., Rochester, N. Y.



FWD ROAD BUILDER TRUCK HAS SHORT WHEELBASE.

A recent development is the road builder truck, recently placed on the market by the Four Wheel Drive Auto Co., Clintonville, Wis., manufacturer of FWD trucks. One of the chief features of this new truck is its short wheelbase, 105 inches, which gives it an exceptionally short turning radius and makes it valuable as a time saver on narrow grades, and obviates difficulties often encountered with long wheel bases. This truck is designed to carry a 3 batch body of 3 tons capacity, the body to be operated by a horizonal hydraulic hoist and the tail gates to be operated individually. The truck also is designed to be used as a tractor for trailing loads to the concrete mixers, and for hauling road machinery.

The Last Word in Truck Testing

"The last word in tests for trucks," says Vance Day, sales manager of the General Motors Truck Co., Pontiac, Mich., "is the combination ramp and perpendicular wall. If a truck will walk up the ramp and then 'stand on its hind legs' until the rear end of the chassis drags on the ground, while the front wheels climb the perpendicular wall, you can be sure you have a truck with all the power and traction you are ever likely to need.

"This type of test was the result of an accident. A GMC truck got off the road and into a sand bank, and when the driver started to pull out he was headed right into a straight wall. He put on the power and the truck started to climb the wall. It kept on until the rear was in contact with the ground and the rubber in the rear tires started to burn and smoke."

To demonstrate the pulling power of the GMC two-range transmission, the combination ramp-and-perpendicular-wall test has been used since in several parts of the country. "When the front wheels begin to climb the wall," says Mr. Day, "the sight is about as convincing as anything that can be imagined. There can't be much argument about the power present, and the truck's operation under such unusual conditions is conclusive evidence that the element of traction has been scientifically planned and arranged for."

FWD Catalog Symbolizes Strength

C. B. Stanley, of the research department of the Four Wheel Drive Auto Co., Clintonville, Wis., manufacturing FWD trucks, sends Motor West the company's latest catalog, which describes the FWD line with type and illustrations not only very excellent as such, but in such manner as to convey inevitably a conviction that the product is sturdy. Goes to show what can be done with the printer's art. The title, "FWD Trucks," embossed on the deckel-edged cover,. is fittingly "husky," and the illustrations within necessarily depict the powerful machines and their parts as they are.

Traffic Motor Truck Co. Absorbed

At a special meeting of stockholders of Traffic Motor Truck Co., St. Louis, the plan calling for the transfer of all the assets to Associated Motors Industries, Inc., was ratified. The latter organization assumes all liabilities. The Traffic Co. gets Associated stock consisting of approximately 7600 shares of 8 per cent preferred cumulative, of $100 par value, and 19,400 shares of common without par value.

This is a huge industry, yet it uses only a little more than 4 per cent of the country's production of steel.

General Motors Trucks

Chassis List Prices

1 Ton - - -	*$1295*
2 Ton - - -	*2375*
3½ Ton - -	*3600*
5 Ton - - -	*3950*

An Opportunity for Better Business

No other line of motor trucks offers the improvement in design and construction of GMC Trucks.

No other line of motor trucks sells for as low a price in comparison to its value.

These are the reasons why a General Motors Truck dealership is the most valuable franchise that can be obtained by any motor truck retailer.

Add to them the well established reputation of GMC trucks, of the company that builds them and that of its parent organization, the General Motors Corporation.

Couple with that the fact that during the recent financial depression, not one GMC distributor failed in business. A dealer should be certain always that his distributor and manufacturer are permanent business concerns.

Moreover, he should seek the line which has a large national organization. In this particular, GMC also is a leader with branches and distributors in every section.

Consider that in selling GMC trucks, you are selling improvements which no other motor trucks have. You have a sales story about GMC that cannot be duplicated.

Such a distinctive feature as the GMC Two-Range Transmission, giving more pulling power and more speed in the heavy models, and doing it with no increase of size in the power plant—

Such features as Removable Cylinder Walls, Removable Valve Lifter Assemblies, Pressure Lubrication, built-in Electric Lighting Equipment, and many others—

All these make GMC trucks better units of transportation, and consequently better units for you to sell.

There can be no finer opportunity for any motor truck dealer from the standpoint of quality, reputation and price.

GENERAL MOTORS TRUCK COMPANY
Division of General Motors Corporation
Pontiac, Michigan

WOLVERINE

Electric Lighting on all models

Electric Starting on all models

36 HOUR SERVICE SAN FRANCISCO TO LOS ANGELES
CALIFORNIA HIGHWAY EXPRESS
HOUSEHOLD GOODS

Wolverine Trucks are daily writing new records in transportation history in California by their unequalled performance on regular, scheduled trips to San Francisco and return, carrying capacity loads and rendering continued and faultless service at low cost.

AMERICAN COMMERCIAL CAR CO.
Manufacturers

BRAUN-STECKER-STEVENS, Inc., Western Representatives
823 South Flower Street, Los Angeles, Cal.

Bethlehem's Hat in Ring

New Company Already Producing Three Models and to Add Others When Good Gait Is Struck

THE June 1 issue said there virtually was no opposition by creditors of Bethlehem Motors Corp., Allentown, Pa., against sale of the plant to a syndicate including Arthur T. Murray, former president, Howard B. Hall, former vice president, and others, whose bid was $550,000 and who had the backing of the bankers who backed the former company.

June 5, transfer of the property at Allentown and Pottstown to Mr. Hall and associates was announced. Mr. Hall heads the newly organized company, named Bethlehem Motors Corp. of New York and intends the Bethlehem truck's wheels shall roll under new, refined models, already in production and listed as follows:

Model KN, 1 ton capacity, "Delivery Boy"	$1195
Model GN, 2 ton capacity, "Fast Freight"	1595
Model HN, 4 ton capacity, "Heavy Duty"	2195

The line is to be increased as production gets well under way. The new design includes heavier parts and more accessibility. The Bethlehem motor, made complete in the Pottstown plant, is retained.

Sales will be through distributors and dealers, as formerly. It is stated a number of them already have been given their former territories.

A service stock parts valued at more than $1,000,000 will be maintained at Allentown, to serve about 10,000 Bethlehem trucks now in the field, and the new models. The idea of service to owners is to be developed extensively.

M. Herbert Beary, appointed special representative, has started on a long trip through the West, including the Pacific Coast, to tell distributors and dealers of the new corporation's plans and policies.

W. H. Rodgers, who was auditor of the old company, now is secretary and assistant treasurer. V. C. Smith, who was factory manager formerly, now has that position at Allentown. W. H. E. Sandalls, who managed the Pottstown plant, again is in that position there. Louis K. Gordon, former associate engineer of Mack Trucks, Inc., and designer of the original Bethlehem trucks, has returned to his old post as chief engineer of the new organization.

Meeting School Transportation Needs

When the consolidated school plan was put into effect it was realized early, especially in California, that its success depended on convenient, economical transportation. School trustees and educators at first bought the bus equipment most easily available but they learned, and now it takes high-powered salesmanship to place trucks in the service of school districts, according to Wesley Brown, truck sales manager of Reo Motor Car Co. of California. At a recent date 30 school districts in California alone transported teachers and pupils in what are styled Reo safety first sanitary school buses.

These trucks have hexagonal windshields for the clearest possible vision in all directions; safety-first control with both hands on the wheel, both feet on the brakes; driver's control of entrance and exit; an interior which can be flushed out easily with a hose; and a heater as protection against cold weather. The buses have seating capacity for from 20 to 40 pupils. It takes from a month to six weeks to manufacture one of them in the company's body building department, which now is working overtime.

Secretary Edwin Denby, of the Navy, whose name is borne by a mighty good motor truck, left San Diego June 9 on the transport Henderson for the Orient.

The ideal man is broad-minded and broad-chested.

Tractor Department

As to Tractor Outlook Abroad

NOT only the Automobile Division, but the Agricultural Implements Division of the Department of Commerce is obtaining much interesting data on foreign fields. What follows is of considerable tractor interest.

Mexico.—More farm implements, machinery and farm wagons were sold in the Chihauhua district in Mexico during 1921 than in any other year since 1912, says Consul Stewart. This was due to the peaceful conditions existing in all parts of the state, thus instilling confidence and enabling the farmer to replace his worn out implements, a thing which former disturbed conditions did not permit. No import statistics are available but it has been estimated by dealers that sales of agricultural implements, machinery, farm wagons and tractors amounted to about $100,000 in 1921. Walking plows and disc plows, cultivators and planters were called for most. The farmers also purchased hay mowers and presses, threshers and tractors, as well as a large number of farm wagons. American goods were sold exclusively.

All the implements used in the various agricultural regions of the Sonora consular district are imported from the United States, and there is a good demand for the same at present among the formers of the Yaqui Valley, Mayo Valley and Sonora Valley. This includes all kinds of implements used growing rice, wheat, garbanzos, beans, corn, alfalfa and barley. At present the farmers are hard pressed for money, many being unable to acquire the implements they need. Many of the implements are purchased at Nogales. There also are several implement and machinery firms located at Guaymas and Hermosillo, which represent American manufacturers.

Brazil.—Consul Lee, at Porto Allegre, reports there are about 360 tractors in Brazil, ten of the tracklaying type, and 350 wheel type. Most of these were received at the ports of Rio de Janeiro, Santos and Porto Allegre, and very few were imported into the northern parts of Brazil. The state of Rio Grande do Sul has 143 tractors, all but three being of the wheel type. No figures are available at present showing the distribution of these tractors throughout the other states of Brazil.

Holland.—Prospects for the introduction of American tractors into the Netherlands are considered fair, although the market is limited, says Consul General George E. Anderson. Dutch farms are small and with the exception of a comparatively few good sized farms in the northern and eastern sections, which are devoted to grain and general farming, most Dutch farming is really market gardening and there is very little possibility for the economic use of tractors. The matter of credit terms for the sale of tractors is of little importance, as the farmers can well afford to pay for what they are willing to buy, and they will buy if it can be shown to them what they buy will be profitable to them.

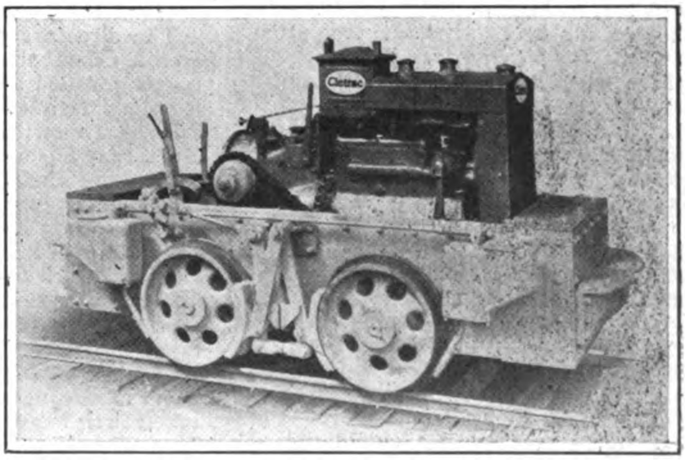
Rumania.—The use of farm machinery in Rumania is increasing slowly. The expropriation of the holdings of the large landowners by the government, and the division of them among the peasants, has greatly reduced the average size of the farms, the usual size now being about 50 acres. The holders of the remnants of the large estates are no longer in position to use farm machinery as advantageously as formerly, and the great majority of peasants tilling their own small holdings have not sufficient capital to invest in modern machinery. Very few tractors are in use. There probably are not more than 400 in the whole of Rumania, says Consul Palmer, Bucharest.

Greece.—The total number of tractors in Greece is about 500, of which about half are of American make, according to a report from Consul General Lowrie, Athens. There are about 150 tracklaying tractors and 350 wheel type. Of the latter 200 are of American make, 70 are German, 40 English, 10 French, and the remainder from Sweden and other countries. Germany also is supplying 40 tractors on account of war indemnity. About 70 per cent of the tracklaying tractors are of British make. The others are French, Italian, German and American. Germany is to deliver 25 of this type on account of war indemnity.

The most popular among the European makes used in Greece are the German Stock and W. D.; the English Wally, Fowler, Aveling Porter; and the Swedish Excelsior. All these types do not seem, however, to have quite met the requirements of this market, which needs a small tractor of about 12 h. p. to be used on the many small-sized farms. The types in use are too big for pulling one plow and too small for two plows.

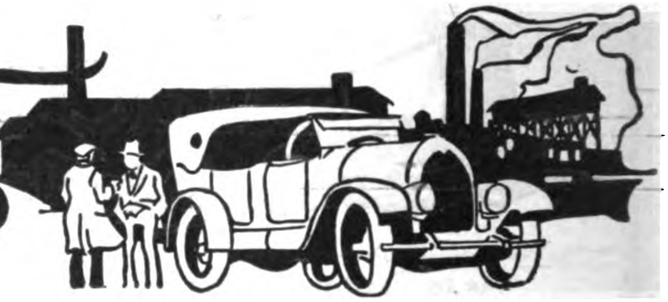
McGonigal Heads Clectrac in Canada

S. A. McGonigal has been elected president and managing director of Cleveland Tractor Co. of Canada, Ltd., succeeding Mr. J. L. Hibbard resigned. Mr. McGonigal's connection with the Cleveland Tractor Co. includes four years of intensive work both at the company's home office in Cleveland and in the field. He has been assistant to the vice president in charge of sales, and manager of the company's Atlanta office, as well as sales manager of the Central District, comprising Michigan, Indiana, Kentucky and Western Ohio. Cleveland Tractor Co. of Canada, Ltd. is located at Windsor, Ont., with branch organizations at Montreal and Winnipeg and distributors at the important agricultural and industrial centers.



A CLETRAC MOTOR ON AN ATLAS LOCOMOTIVE.
A new and unique use for a tractor power plant is illustrated in the above picture of a new light industrial locomotive just announced by Atlas Car & Mfg. Co., Cleveland. The Model F Cletrac, made by Cleveland Tractor Co., minus its side frames, tracks, seat and steering wheel, is set bodily into the sturdy frame, giving an unusually light, inexpensive yet powerful industrial locomotive. For road construction, industrial railways and general plant hauling this combined Cletrac-Atlas locomotive is giving excellent servce.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

Were it not that the business has been so unexpectedly splendid, the motor car manufacturers would be supremely happy. As it is, they are nervous. Starting the year with what they "doped out" as good prospects for a business equal to 1921, they now find an almost capacity demand, and a demand that is continued. It has been said that the motor car business is either a feast or a famine. It is surely the time of feasting now, but the diners around the table are not sitting easy. Their analysis of the potential market does not lead them to believe that what is, is possible of steady maintenance.

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The present buying is keeping the makers busy, and the more optimistic belileve that as the present market slackens the farmer market and other fields of business, prosperous in the past, will develop again. Optimists feel that this may result in all-year business, and perhaps a record in manufacturing—something that would surely place motoring as a business almost to the fore of all businesses of the country.

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In the days of the slump many were so bold as to predict that the time had come when the motor car "boom" had blown up, but firm believers in the industry called attention to the number of motor cars in the city streets and in the country, to the fact that these cars were wearing out, and to the development of new buyers as the babies grow up; and to what might happen were all motor cars to be replaced by horses. The remark of one prosperous maker in Cleveland is recalled. His business had dropped to a few hundred cars monthly, in fact to less than 20 per cent of top production. He said: "We are not worrying. They've got to buy some time, and we'll wait them out." Today he is breaking all his records. He was wiser than others who were spending small fortunes trying to force their cars on a market that would not absorb them. Today the market is taking all that the manufacturers turn out.

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Competition for help is raising wages, and help, skilled and unskilled, is not easy to get. During the slump, motor car workers scattered and many entered other lines, and it takes time to induce them to give up something steady, even though it pays less, to return on a chance that the business will slump during the summer and fall, and again leave them stranded. During the slump it was hard times for the working man who faced starvation. He does not forget.

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With makers bidding against each other for help, with shipments being demanded by express, with commitments lengthening gradually, and with overtime work, the makers are reminded of the feverish days following the war. They realize what followed the fever, and this makes many cautious. Others plunge as before, and some may come to grief on that account.

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The question of price is unimportant now. Makers increase their prices and it causes no flurry, yet only back as far as the Chicago national show, when everyone had crepe hung on his arm, figuratively speaking, a $100 increase by one maker caused excitement, while reduction by one maker brought counter reductions by a lot more.

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California automotive trade conditions are cited all over the country. The 1922 gains surprise many, for that state did not drop in business last year from 1920 but showed gains, and it was believed it might drop back this year.

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The directors of the National Automobile Chamber of Commerce feel very much gratified at the business done in the opening quarter of the year. They state that distributors reported early in April that business was good or excellent, more than they did that it was poor. The replies came in response to questions sent out. Through the same source it was learned that the used car situation is clearing. Dealers are more careful in making exchanges and therefore are more certain of profit on cars taken in trade. Reductions in prices of used cars have kept pace with reductions in the new cars. Dealers have taken their losses, and are again pulling into smoother waters.

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Parts and accessory men are doing all they can to encourage the car makers whose productions are small. This is natural. Large car manufacturers are likely to make their own parts. One smaller maker says it is possible now to obtain as good a price on 10 axle deliveries as on 100, and that that condition exists also as to engines and other things. In past years parts men regarded small orders as unprofitable, but today they are favoring them, realizing that the "baby maker" of today is not one by choice but through circumstances, and that he must be taught again the art of crawling, after his serious illness, before he may be encouraged to walk again.

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To the Motor and Accessory Manufacturers' Association members must go much credit for the remarkable recovery of a great business. The association members have stood loyally behind the guns and have accomplished much in enabling car makers to continue—by extension of credit and by not pressing claims too hard. Many a maker will come through with flying colors as a consequence, and his friends in need will benefit with him.

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Change is noticeable in every motor manufacturing center. Gloom has given way to confidence, slow steps have become rapid steps, the pace has quickened in every way, and faces no longer are hung with crepe. It is now a case of reaping the reward of patience, both with the car and truck makers, and with the parts and accessory manufacturers. The latter held the manufacturers together, "carried" them, in fact, and now every maker who weathered the terrible storm is doing nicely; seemingly, anyway.

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It needs but a trip through the country to see that today's extraordinary demand has to do with business and not pleasure. Hotel men report that tourist traffic is relatively light but that persons traveling on business are steadily becoming more numerous. Traveling men are using passenger cars and light trucks more than ever before, and country roads show a steady stream of them with sample cases and display signs on the cars.

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Reports of factory schedules are especially favorable among the makers of low and medium priced cars. Some makers of higher priced cars are reported to have decreased working forces slightly, but all others have shown substantial increases.

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Everything seems to be on the upward trend in spite of the coal strike and other strikes, poor roads and hard rains. Developments are all favorable.

BRAINS OF MENTAL GIANTS

Supervise and Make

"LEMPCO BRAND" Automobile Axles and Shafts

That's why they are the **Sturdiest—Strongest**—Standing the Strain of long, hard usage. Sold at Attractive Prices.

Nationally known as the Axle with the "UNLIMITED GUARANTEE" for there are NO "COMEBACKS."

The "TRIANGLE" — FINEST OF MATERIALS, WORKMANSHIP, CONSTRUCTION,

under the eyes of Experts, Make "LEMPCO BRAND" products superior to all other Replacement Axles and Shafts. They are made to give Satisfaction and make for Profit to Jobber, Dealer, and Car Owner, alike.

DEMAND OF YOUR JOBBER, "LEMPCO BRAND" AXLES

If he cannot supply you, mail us your order with your nearest Jobber's Name and Address. Service will be rendered.

Manufactured by

LAKE ERIE METAL PRODUCTS CO., Cleveland, Ohio

Western Sales Representative, THOS. M. GARDINER, 320 Market St., San Francisco, California

CHANSLOR & LYON COMPANY—EXCLUSIVE PACIFIC COAST FACTORY DISTRIBUTORS

San Francisco, Oakland, Los Angeles, Fresno, Portland, Tacoma, Seattle, Spokane

Unwin Is National Sales Manager.

Harry Unwin, automotive veteran dating back to 1901, recently was appointed sales manager of National Motor Car & Vehicle Corp., Indianapolis. He succeeds James M. Clarke, who now is managing National Motor Car Co. of New England, in Boston.

The system for indicating turns and direction, practically standard in the entire motoring world, was originated by Mr. Unwin when, many years ago, he routed the historic New York-to-Pittsburgh endurance run, forerunner of those annual classics which have done so much for motoring.

Mr. Unwin was the first National Automobile of Commerce secretary. Later he was New York branch manager for Chalmers, White and Pierce-Arrow. In the war he was a major of engineers in the Ordnance Department, and was directly responsible for the execution of several large truck and tractor contracts. After the war he was Reo branch maneger in Chicago.

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Re Hartford Automotive Parts Co.

The creditors' committee of Hartford Automotive Parts Co. that bid in the property for $350,000 at the recent receivers' sale, announce that Spicer Mfg. Co. has offered to purchase all the assets and property, except the real estate and buildings and outstanding accounts payable. The Spicer Co. will organize a new corporation and will pay $220,000 in cash to the creditors' committee. Of this amount $120,000 will be raised by the Spicer Co. on the notes of the new corporation, which is to have a capital of $330,000 of 7 per cent preferred and $100,000 common stock. The creditors' committee will receive $230,000 of the preferred. The committee will retain all of the real estate and buildings, but will lease to the new corporation about one-third of the area of the present plant.

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Steigerwalt Promoted by Durant.

A. K. Steigerwalt has been appointed manager of the new parts and service division of Durant Motor Co. of Michigan, at Lansing. His experience dates back to 1909. For five years he was parts and service manager for Chevrolet Motor Co. of New York, and later served a year in the same work at the Flint factory of Chevrolet. Recently he was promoted to be assistant general parts and service manager of Chevrolet at the Detroit central office, from which position he resigned to join Durant.

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Flum Rejoins Old Chief.

R. A. Flum, of Cleveland, has been appointed general factory manager of C. G. Spring Co., Kalamazoo, Mich. He held a similar position years ago with Perfection Spring Co., Cleveland, and now is associated again with his old chief, Christian Girl.

The C. G. Spring Co. is taking steps to increase production as fast as possible, to take care of its growing business. A plating plant is now being added to the factory buildings, with similar plants in Detroit and Chicago.

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Lomar Incorporated.

Lomar Mfg. Co., Middletown, O., manufacturing the Lomar shock absorber, has been incorporated in Ohio for $100,000, all common stock. The officials are: C. W. Shartle, Jr., president and general manager, Middletown; Tom Randolph, vice president and director, Houston, Tex.; L. L. Lomar, general superintendent, Middletown.

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Sheets, Veteran, with Lomar.

W. M. Sheets, formerly of the Miami Cycle Works, has just been made sales manager of Lomar Mfg. Co., Middletown, Ohio. Mr. Sheets is an old war horse and is known from coast to coast. The Lomar Co. manufactures the Lomar shock absorber.

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Neale Heads Spencer-Smith Sales.

W. M. Smith, general manager of the Spencer-Smith Machine Co., Howell, Mich., announces appointment of J. E. Neale, formerly of Chicago, as sales manager. Mr. Neale is now arranging national distribution of Spencer-Smith pistons.

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Only 1½ per cent of us all have incomes exceeding $3000 a year.

Big Maxwell Figures.

Figures released by William Robert Wilson, president of Maxwell Motor Corp., show its net profits for April alone exceeded $500,000. Cash and cash securities on hand passed the $6,000,000 mark, although the corporation recently anticipated the payment of upwards of $4,000,000 in notes from 60 to 75 days before maturity. As regards cash position, Maxwell today is at one of the high points of the calendar year.

It was during February that Maxwell definitely turned the corner financially and began to experience the returns from the increased sales momentum which since last autumn has so rapidly carried it forward to an important position among the more prominent producers. Mr. Wilson regards the fine April showing as especially significant because of the much better showing since. Mr. Wilson says:

"Much credit for the favorable showing should go to the executives of the various departments, who have made it possible to reduce operating costs and expenses to the minimum without sacrificing any part of the quality of the product."

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Enlarging Nash Four Plant.

Enlargement of the Nash Four factory at Milwaukee, to provide capacity that will more nearly care for the demand, now is in the hands of contractors. A new body and sheet metal plant, 100x400 feet and 3 stories high, will enable production of the Nash Four almost in its entirety in the Milwaukee plant. At present certain parts of the car are made in the Nash Six plant at Kenosha. The extension to the Nash Four plant was planned a little more than a year ago, but construction was postponed to await more favorable building conditions.

Since the first of the year demand for the Nash Four has increased each month, until in March this model was completely oversold and has been oversold ever since.

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Bacon on Special Goodrich Work.

W. O. Rutherford, vice president in charge of sales of B. F. Goodrich Rubber Co., announces appointment of H. M. Bacon, to special sales work in the company's tire division. For several years Mr. Bacon was head of one of its tire sales divisions, and left to accept the vice presidency of McGraw Rubber Co., East Liverpool, O. Two years ago he went to Thomas Cusack Co., outdoor advertising concern, as its Cleveland representative, and it is from there that he comes to Goodrich.

Mr. Bacon's duties will be confined largely to executive direction and development of sales in the tire division, where he has an outlet for his wide knowledge and experience.

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Is Maxwell's Quebec Supervisor.

S. S. Soglovitz, for a number of years associated with the Cleveland Tractor Co. as a sales and service supervisor in Europe, North Africa, Canada, and the United States, has been appointed sales supervisor in the province of Quebec for Maxwell Motor Co. of Canada, Ltd., according to an announcement issued recently by J. L. Hibbard, president of the Canadian company. Mr. Soglovitz gained his early experience in the industry with the Ferro Motor Co. and the White and Peerless companies of Cleveland.

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Says Longer, Fewer, Better.

Reo Motor Car Co., Lansing, temporarily has adopted a 5 day work week made up of 10 hour days instead of the former 5½ day week. This new plan is workng out satisfactorily, and giving the company a better production week than formerly. Officials said the schedule, while adopted primarily for the summer, so that workmen would have more time for gardening and week-end trips, might be extended over the full year as a more economic method of factory operation.

J. W. HOBBS.

Mr. Hobbs is the inventor of the heat indicator manufactured by the well known Borg & Beck Co., Moline, Ill.

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Jackson at GMC Headquarters.

J. B. Jackson, formerly with E. I. duPont deNemours & Co., of Wilmington, Del., and more recently with Buick at Flint, now is at the central office of General Motors in Detroit, as personnel assistant to C. S. Mott, vice president and chief of the advisory staff.

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Major Search to Boost Carter Car.

Maj. C. W. Search, of the Carter Motor Car Co., Inc., Washington, D. C., has been placed in charge of domestic and foreign advertising of the Carter car.

Bradley Hitches to Air-Cooled Car.

W. J. Doughty, president of Detroit Air-Cooled Car Co., of Detroit, announces selection of L. M. Bradley as general advertising manager. Mr. Bradley has opened offices in the General Motors Building in Detroit, where the D-A-C advertising department will be located. "Brad," as he is known, has had an extensive sales, advertising and association experience covering a period of 23 years. At one time he was general manager of the Motor and Accessory Manufacturers' Association in New York; was business manager of the American Motorist, official publication of the A.A.A.; first advertising manager of United States Motor Co., and has been affiliated with Studebaker, Willys-Overland, Root & Van Dervoort Engineering Co., and for four years was advertising manager of the old American Motor Car Manufacturers' Association of New York, formed by Henry Ford to combat the famous Selden patent.

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Lavier Re-elected by Ray Co.

Thomas H. Lavier, Jr., inventor of the Lavier formula plates used in Ray batteries, has been reelected president of Ray Battery Co., Ypsilanti, Mich. M. R. Read, of Ypsilanti Savings Bank, is vice president; J. S. McDowell, secretary; A. M. Colegrove, treasurer. E. B. Eastburn, appointed sales manager, formerly was with Republic Rubber Co., where he was Western district manager, with headquarters in Kansas City.

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Firestone Earnings Will Be Large.

Firestone earnings are expected to exceed $2,500,000 for the first seven months of its fiscal year, more than $10 a share on common after preferred dividends, but before other charges. Operations now are within 4000 tires a day of capacity in the tire plants and better than 75 per cent capacity in the rim plant.

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Firestone Plant in Canada.

Firestone Tire & Rubber Co. will start work soon on a new tire building plant at Hamilton, Ont. Firestone obtained the site during the war, but deferred building operations. Under present plans the plant will have an initial capacity of 3500 tires daily. The Akron plant is now producing 25,000 a day.

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Duncan for Maxwell Personnel Work.

Supervision of personnel activities of Maxwell Motor Corp. has been placed in the hands of J. N. Duncan, superintendent of labor and factory personnel. Formerly he was with Dodge Brothers seven years, and prior to that was with Studebaker.

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Arthur M. Dean has resigned as vice president and chief engineer of Templar Motors Corp., Cleveland, to take up similar duties with the Rubay Co., well known Cleveland body builder.

Hanson Motor Co. News.

J. C. Tegder has been appointed director of sales and advertising of Hanson Motor Co., Atlanta, Ga., manufacturers of the Hanson Six. Mr. Tegder has been a motor car distributor a number of years, and in 1910 was sales manager of the Staver factory in Chicago.

F. J. Kelley, New Orleans, has taken the Hanson distributorship for Louisiana, and Law Motor Company, Biloxi, Miss., the Southern Mississippi territory.

A trainload of Hanson Sixes went from the factory recently to the Florida distributor, Grady Deen, Jacksonville and Tampa. The shipment consisted of 27 carloads, and was the second trainload to Mr. Deen within ten months.

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Hawk, Durant Michigan Sales Head.

M. B. Leahy, general sales manager for all Durant plants, announces appointment of J. W. Hawk as sales manager for Durant Motor Co. of Michigan, in Lansing. Mr. Hawk, who succeeds Leon R. German, who resigned recently, has been in the industry since 1900. Originally with Overland, he joined Chalmers later, and since 1915 has been with Chevrolet, as zone sales agent manager in Texas and other sections, and more recently as special representative of the sales department with headquarters in Detroit, which position he left to join the Durant staff.

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Walsh with Motor List Co.

Robert T. Walsh, well known through his connection with Ford in an advertising capacity, and later as advertising manager of the Maxwell, King and Briscoe companies, has been appointed advertising manager of the Motor List Co., Des Moines, Ia., with branches in all principal cities. Motor List Co. has for several years compiled national lists of automobile owners, and also has done statistical service for automobile companies.

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Lincoln Fat with Orders.

Lincoln Motor Co. reported enough business on hand recently to operate at capacity three months. Orders are reported to be coming in three times faster than the factory can produce them. Special efforts are being made by officials to improve on the time required to build the car, and much special equipment is being added. It is hoped within a short time to have production at 40 to 50 a day, which will be the maximum.

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Cole Stock Pays Well.

Along with the announcement that there will be another increase in production, Cole Motor Car Co., Indianapolis, issued the regular bi-annual dividends to stockholders recently. It was 10 per cent. For the past five years Cole stockholders never have received less than 20 per cent per annum. Production for May exceeded that of May of last year more than 100 per cent, and was raised 100 per cent for June.

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Gallup Leaves Nordyke & Marmon.

David L. Gallup, for the last five years head of the division of research and experiment of Nordyke & Marmon Co., Indianapolis, resigned on May 1. Mr. Gallup is well known and has been particularly active in the Society of Automotive Engineers. Before entering the industry at the Marmon plant he was for many years in charge of the automotive division of the Worcester Mass., Institute of Technology.

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Fifty Lexingtons to Montreal.

Although trainload automobile shipmnts frfom one point to another in the United States are not uncommon, an international shipment of such size is a little out of the ordinary. One consisting of 50 Lexington Supreme 7 passenger cars, valued at well over $100,000, left the factory at Connersville, Ind., recently, bound for the Montreal Vehicle-Motor Co., Ltd., at Montreal, Can.

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To Work for Hupp Abroad.

Recent announcement was of three important additions to Hupp Motor Car Corporation's foreign organization. Roger N. Lagow has been made South American sales manager, with headquarters at Buenos Aires; Charles S. Turner has sailed for the Orient to be Far East manager. P. A. Pollius Ferwerda becomes assistant European sales manager, with headquarters in Paris.

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Ford Output Increased.

Ford dealers throughout the United States asked for a total of 194,750 cars, trucks and tractors to meet June requirements. As a result the factory schedule for June was made to 140,000, an increase of 10,000 over May. This means building 5400 daily. Shipments are in carload lots to the assembly branches.

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Personal Items.

C. S. Rieman, president of Elgin Motor Car Corp., has been appointed chairman of a committee of the Air Board of Chicago to co-operate with the Lincoln Park commissioners in laying out and developing an aircraft field.

Frank A. Bradley has resigned as secretary and treasurer of the Commerce Motor Car Co., after a connection of four years. He will take a trip to Europe.

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Henry S. Lord, vice president and treasurer of Moline Plow Co., has resigned after a 10 year association with the company. He has not as yet announced his plans.

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Lynn McNaughton, general sales manager of Cadillac, announces two changes in the sales department. J. A. Grier, whoh as been specification manager four years, now is Western district manager, and Chester B. Hill has assumed Mr. Grier's former duties.

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J. M. Howard, advertising manager of Chandler Motor Car Co. more than six years, has resigned, and to date has not announced his plans.

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F. S. Stratton has resigned as general sales manager of Grant Motor Car Corp. to become general sales manager of Vacuumeter Mfg. Co., Cleveland.

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L. D. Maxon has resigned as purchasing agent of Durant Motor Co. of Michigan, as purchasing for all Durant enterprises will be concentrated in New York, and he preferred to remain in Lansing.

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James B. Curtis, of New York, director and general counsel of National Motor Car & Vehicle Corp., died in Indianapolis, late in April. Heart disease.

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F. A. Bonham has resigned as manager of parts and service for Chevrolet, Detroit, and has accepted a similar position with Durant. His headquarters will be at the Long Island City plant.

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R. M. Cowhan has been appointed export sales manager for Earl Motors, Inc., succeeding Clarence Trenton, who died some time ago. Mr. Cowhan formerly was an assistant sales manager at the factory, and will continue the export headquarters there.

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O. E. Utz has become sales manager of the Canadian plant of the Fedders Mfg. Co., Buffalo. For 20 years he was purchasing agent of the Pierce-Arrow Co.

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L. T. Robinson, who has been assistant advertising manager of General Motors Truck Co., Pontiac, Mich., has joined the staff of Campbell-Ewald Co. at the office in Detroit. Previous to his connection with the Pontiac plant he was for three years a member of the copy department of Green, Fulton, Cunningham Co. After graduation from Michigan University in 1913 he was on the Detroit Free Press reportorial staff three years.

W. O. Singer, who has been district manager for Globe Rubber Tire Mfg. Co., Trenton, N. J., has been appointed general sales manager of Advance Rubber Co., Brooklyn, N. Y.

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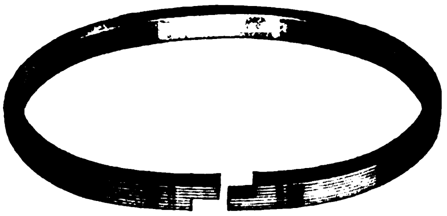
Henry Ford's Ford was stolen in Detroit recently. The police couldn't recover it by next morning, so Henry had to pick a new one out of stock.

(Turn to page 63)

New Things in the Accessories Field

HETE-PRUF RINGS.

The Hete-Pruf piston ring, manufactured by Leeseburg Machine & Mfg. Co., Fostoria, O., is a one-piece, step-cut piston ring, with machined and quick-seating surface and micro-ground sides. By the treating process developed by Leeseburg engineers after 3 years experimentation, any pre-determined degree of wall pressure may be obtained without hardening the outer surface of the ring. This process has been patented, and it produces a fine grained, gray iron ring, which is absolutely proof against warping or loss of tension from heat up to a temperature of 700 degrees, although the company's engineers have found that the highest temperature reached by even the top rings in a water cooled engine, even if overheated, is but little above 400 degrees.



HETE-PRUF PISTON RING.

These rings are sold under positive guarantee against warping and loss of wall pressure or compression. Distributed by The Zinke Co., 1327 South Michigan Ave., Chicago.

"FORD FAITHFUL" FAVORED.

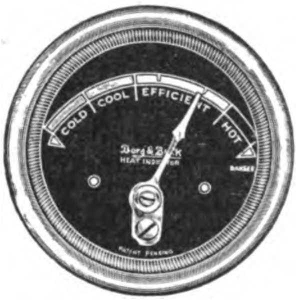
The opening of the touring season, and general overhauling of cars, is creating excellent demand for Ford Faithful oiling systems, manufactured by W. O. Thompson Mfg. Co., Pasadena, Calif. Dealers who put the device before customers ordering new parts are handling a remarkably active volume of sales.

The manufacturer reports the system is making excellent headway in the East and Middle West. Inquiries are being received from England and from even more distant points. There is now no question that there is a wide field for an effective preventive of burnt-out bearings and scored cylinders.

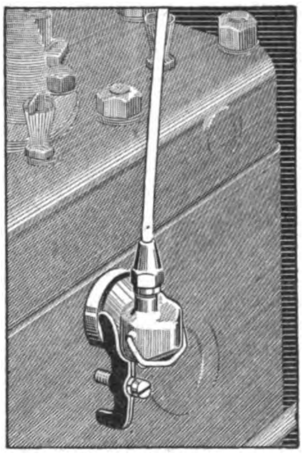
BORG & BECK INDICATOR.

J. W. Hobbs, member of the Society of Automotive Engineers, is the inventor of the Borg & Beck heat indicator, an instrument whose principle of operation is said to be entirely new. He has been connected with the automotive engineering for 15 years. Before the war he was automobile expert with the War Department, and during it was captain of ordnance in the A. E. F., and afterward was retained in the ordnance department as automotive engineer. Now he is with Borg & Beck Co., Chicago and Moline, Ill., as experimental engineer at the Moline plant.

After 4 years of experimenting, and many rigid tests, Mr. Hobbs has perfected a new type of instrument which correctly records the true temperature existing at the engine on a gauge dial, installed on the instrument board where it is visible and easy to read, by day or night. The actuating unit is clamped directly against the engine, and contains a highly sensitive thermostat, unique and small in design, but positive in action. Any slight variation in engine temperature causes it to expand or contract, in direct proportion to degree of heat or cold. Temperature ranges are designated by contrasting colors on the dial, so the operator can tell at a glance when engine is cold, cool, efficient, or hot to the danger point. A small gear segment and pinion are so connected that a turning motion is given to the flexible shaft, which connects pinion with the pointer on face of dial. The principle of operation is purely mechanical. Each instrument is adjusted to record accurately the temperature variations of the particular motor on which it is installed. It is easily installed, and permanently adjusted. When correctly adjusted, it operates automatically, accurately and efficiently.



DIAL OF BORG & BECK HEAT INDICATOR.



BORG & BECK INDICATOR CLAMPED AGAINST THE MOTOR.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

REAL MOTOR METER LOCK.

The Fletcher motor-meter lock, a recent invention, is claimed to be absolutely thief-proof. Unlike other radiator cap locks it does not screw on or off. A quarter turn of lock or cross arms permits removal or replacement, but the individual key must be used, or it cannot be removed.

It is made in one size, with aluminum bushings of sizes to fit each make of car. The bushing bolts to the inside of the threaded radiator filler neck. Turning the key in the lock arm withdraws the bolt of the lock so it can be placed on over bushing. Another turn of the key shoots the bolt back, and cross arms can be turned to driving position with bolts riding in a deep slot in bushing. Cross arms are held in place by a special design of the lock cap which binds as the cross arms are turned. It is claimed this lock is proof against steam and heat. Graphite washers make the cap steam-tight. The lock is of colonial design, heavily nickeled, and matches the lines of high grade cars. There are more than 1500 different combinations to the cylinder locks in use, preventing any duplication of keys. Manufactured by Motor Meter Lock Mfg. Co., Los Angeles. Distributed by H. F. Joy Co., 1311 S. Figueroa St., Los Angeles. Price $6.50.

Fletcher
Motor-Meter Lock

FLETCHER MOTOR-METER LOCK.

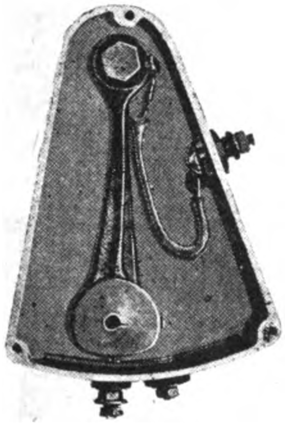
CRITZ USED ON FAGEOL.

The Critz super-pressure lubricating system has been adopted as standard equipment by Fageol Motors Co., Oakland, Calif., on its three truck models, and several automobile stage types, according to Will Fageol of the company. The Critz is another California product, manufactured by Lathan Auto Supply Co., San Francisco, and comprises primarily the grease gun, developing 2000 pounds pressure, and which connects with the bearing to be lubricated without need of a hose by means of a patented swivel head. This head contains a ball check which automatically cuts off flow of grease without rewinding when the lubricator is removed.

A mere billion gallons is all the gasoline the country has as reserve stock.

SAFETY TRACTOR CUTOUT.

The Gray Safety-First automatic ignition cutout for Fordson tractors is manufactured by R. H. & H. C. Gray Co., 1315-19 5th Ave., Seattle, to positively prevent the danger of the machine turning over backwards on steep slopes. It "kills" the engine by cutting out the spark when the tractor's front end leaves the ground 26 inches. It can be adjusted to break ignition contact at any dangerous angle. As the front wheels settle back to earth the spark is cut in again, starting the engine and saving the trouble of dismounting and cranking it.



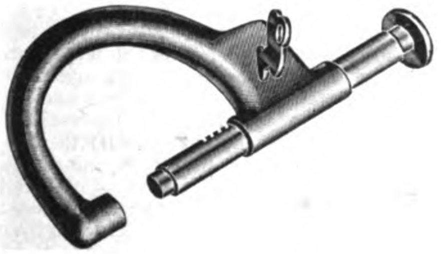
INTERIOR VIEW, GRAY SAFETY-FIRST CUTOUT.

To install the Gray device is a matter of 10 minutes. Second and third bolts on crankcase, ahead of magneto terminal, are removed, cutout is set by using same bolts, low tension cable is removed from magneto terminal and fastened to lower terminal of cutout case. A short piece of cable is attached to rear side of cutout case and to magneto terminal.

It is guaranteed for 5 years, and is handled by numerous Northwestern tractor dealers and accessory concerns, and by Chanslor & Lyon throughout the Coast territory.

DEFIANCE LOCKS.

The Defiance lock for securing automobiles from theft by locking steering wheel and control levers, locking robes, suitcases, etc., to robe rail, or steering post, and also very useful as a protection for motorcycles and bicycles, has been placed on the market by Universal Products Co., 24 California St., San Francisco, headed by H. A. Stovel, manager. It is nickel plated, and is simple and neat in appearance, and comes equipped with two keys. Price $3.



DEFIANCE LOCK HAS VARIOUS USES.

EASES FORD STEERING.

Elimination of the weariness of arms and hands that results from the direct steering apparatus of the Ford car is the purpose of the Bilt-Rite steering device, manufactured by Bilt-Rite Mfg. Co., Indianapolis. It is a double variable cam, controlled by finely tempered leaf springs, assuring proper action at all turning positions. All working parts are protected from mud and dirt, and cam operates in oil. Front wheel wobble is banished, tire expense lowered, and the familiar steering wheel rattle disappears. It provides a third support to the tie rod, preventing buckling, the manufacturer states. Distributed on the Coast by Pacific Bilt-Rite Co., 2000 University Ave., Berkeley, Calif.

RUCKSTELL FORD AXLE.

The Ruckstell Ford axle is claimed to double the touring value of the Ford car by putting four speeds at the driver's disposal; a range sufficient for all conditions of travel. The special Ruckstell 3 to 1 gear replaces the standard ring gear with its ratio of 3.63 to 1. High speed is increased 20 per cent, vibration is eliminated, and still first speed is more powerful that the standard Ford low, it is stated by Ruckstell Sales & Mfg. Co., 819-21 Snyder Ave., Berkeley, Calif. Operation is by a lever somewhat similar in appearance to that on other makes of cars, but which takes effect through a shaft reaching directly to the rear axle, where the Ruckstell planetary reducing gear has been installed beside the standard Ford differential. Pulling the lever causes the Ruckstell rocker arm in the rear axle to move the lock ring into use, and the wheels are driven through the Ruckstell gear. Propeller shaft speed is not affected by this gear's operation, and strain on the shaft is, in fact, relieved. The Ruckstell-equipped Ford can be handled easily in slow traffic at 1½ miles an hour, and braking power is increased 30 per cent, according to the manufacturer.

SPEEDOMETER FOR FORDS.

After years of research and experiment, an improved speedometer for Ford cars and trucks has been perfected by A C Spark Plug Co., Flint, Mich., well known for its A C spark plugs. Together with a special drive for Fords, the new instrument comes packed neatly in a small carton, and is a most attractive article. Its round, nickel-trimmed dial fits right into the instrument board and has the appearance of an original part of the car.

The dial face is jet black, with numerals in white. A 100 mile trip register with tenths and a 100,000 mile total register are provided. Miles per hour from 1 to 70 are shown accurately, steadily and noiselessly on the roughest roads, it is claimed. It is driven from the right front wheel, and can be attached without drilling holes in hub flanges or spokes. Three regular flange bolts hold driving gear, which connects to flexible shaft by a coupling, eliminating the need of a swivel. The gear pinion is of improved fibrous material for noiseless and efficient operation. The A C hole cutter, an ingenious device for installing this speedometer in metal or wood instrument boards, is a companion product.

WESTERN AUTO CATALOG.

Western Auto Supply Co., with more than 45 accessory stores all over the West, has issued its 1922 automobile supplies and camping equipment catalog, containing information on a tremendous variety of utilitarian and vacation-time automotive equipment. Copies are furnished to automobile owners in any part of the West upon request.

In Peking, China, gasoline costs 97 cents, gold, per gallon.

MOTOR KLEEN.

To meet the steadily increasing demand for an efficient means of carbon removal from automobile engines, over two years were spent in developing Motor-Kleen, a scientific preparation of harmless acid-free oils, guaranteed by the manufacturer not to injure the engine or interfere with lubrication. Sprayed in through spark plug vents, Motor-Kleen is said to enter the pores of the carbon, forming a gas by uniting with oxygen in the air. Upon ignition this gas burns, turning carbon into powder, which is swept out through the exhaust. The powder is so finely pulverized that it cannot lodge on valve seats or manifold.

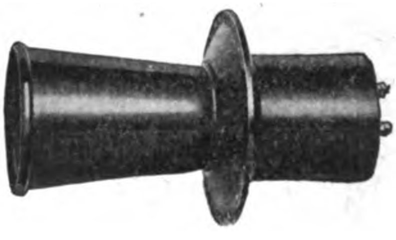
MOTOR-KLEEN
REMOVING CARBON
Gasoline Engines
Motor Cars
Motor Cycles

MOTOR-KLEEN REMOVES CARBON.

Using Motor-Kleen every 700 to 1000 miles, motorists can keep their engines always free from carbon, according to Motor-Kleen Corp., Long Island City, N. Y.

BASCO MOTOR HORN.

A new development in electric motor driven horns is being produced by Briggs & Stratton Co., Milwaukee, large manufacturer of automobile switches. The new Basco motor horn sells at $5. The motor unit differs markedly from conventional horn motor design. It is very simple and has very few parts. Among noteworthy features are oilless bearings, and a new type of brush holder construction. No lubrication being required, troubles due to oil and grease, or lack of them, are eliminated, and it is impossible for the brushes to stick, it is claimed. Very high torque motor insures instant response to horn button, and gives a very penetrating warning. External tone adjustment is provided. The horn consists of only 5 units, and can be entirely taken apart and put together in 5 minutes. No tools are necessary, except a wrench, as only two nuts need be removed.



BASCO HORN.

SPARK PLUG GAP.

Adjust the gap in your spark plugs to 25/1000 inch. Use a thickness gauge to measure the gap, don't guess. Be sure the gap is the same in all plugs, as the engine will not run smoothly with a large gap in one plug and a small gap in the other.

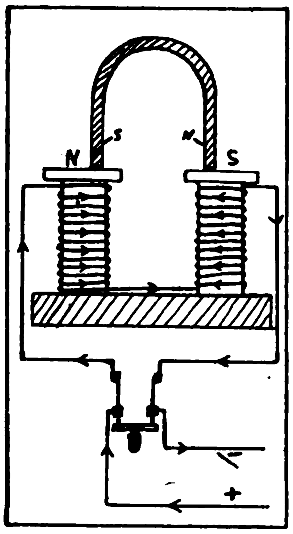
Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question relating to automotive mechanical matters can be answered.

A MAGNET CHARGER.

A very good magnet charger can be made in the spare moments with very little expense, as shown in illustration.

Take a piece of cast iron 8 inches long, 4 inches wide and ½ inch thick. Drill two ½ inch holes in position in which cores are set. Next, take two pieces of mild steel 1 inch in diameter and 5 inches long and set them in the holes in base. Place a washer, 2 inches in diameter, on the top of each core, then wrap cores with tape to insulate them. After taping, shellac the tape and copper wire on each core. Connect the ends of the winding so the current will flow through them in the opposite direction, thus making one a north pole and the other a south. The remaining ends of the windings will lead to the switch and from the switch to the battery. When the ends of the wire are connected to the battery and the switch is closed the cores will be strongly magnetized.



MAGNET CHARGER.

When placing a magnet on the charger, close switch, hold magnet crossway between poles of the charger and let it pull itself to the charger, so as not to get it on charger in the wrong position, which will change the polarity of the magnet and when it is replaced on the magneto with the polarity opposite from when removed it will not work; so be very careful not to change the polarity when charging.

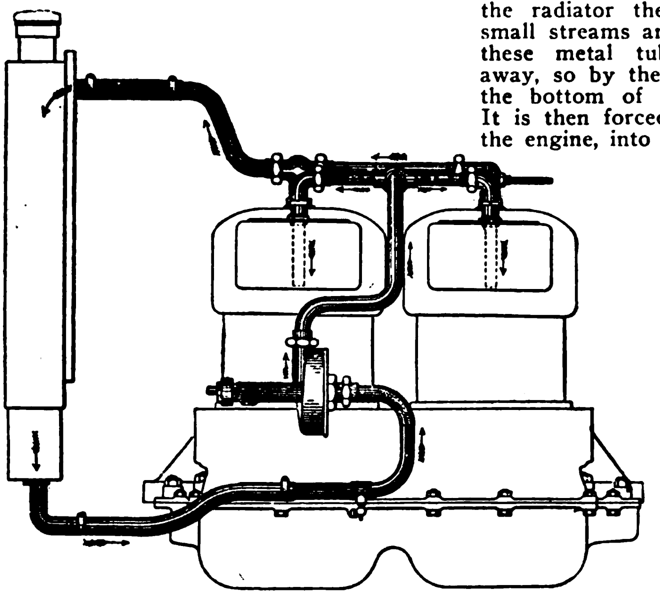
This charger can be connected to the 110 volt lighting circuit, if it is direct current, by connecting five 32 candle-power carbon lamps in parallel or multiple in one wire. The lamps will act as resistance by which the volume of current passing through charger may be controlled. When charger is used with battery it is connected directly, as the resistance in the winding is sufficient for the battery voltage. This charger must be used with direct current only.

HAMMER HANDLE TIP.

A good hammer handle is prized highly by a good workman. One of the best ways to keep the handle in proper condition is to drill a quarter-inch hole in the handle and fill it with oil. The hole should be plugged and fastened with a screw or wood pin. The oil will keep the handle from splitting and give it more flexibility.

ENGINE OVERHEATING.

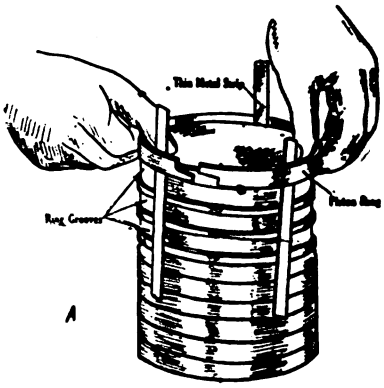
There are many reasons why an engine may run too hot. The principal ones would most likely be found in the cooling system. A water cooled engine circulates water in jackets around the cylinders and then passes the water out of the top of the jacket to the top of the radiator. In the radiator the water is divided into small streams and air is drawn between these metal tubes, carrying the heat away, so by the time the water reaches the bottom of the radiator it is cold. It is then forced by a pump, driven by the engine, into the bottom of the water jacket, absorbing heat as it rises to the top, and carrying it out to the radiator as shown in the illustration. Anything that would prevent the water from circulating would of course cause overheating, viz.: radiator clogged; hose connection clogged; pump not working; fan belt slipping. If the hose is clogged the spot can the hose. It will be very hot next to the engine and cold on the other side of the section that is clogged. If the water is circulating the radiator should be the same temperature all over the surface. If it is very hot at the top and cold at the bottom, the water is not circulating.



ILLUSTRATING WHAT CAUSES ENGINE OVERHEATING.

REMOVING PISTON RINGS.

Piston rings are made of cast iron and are very brittle. Great care must be exercised in removing or replacing rings, so they will not break. The best method in removing them is to take three narrow strips of tin or light metal and slip them under the ring, spacing these strips equidistant from each other as shown in illustration. These strips will hold the ring out of the groove and it can be slipped off very easily. The same method can be used in replacing a ring. By sliding the ring over the strips it can be pushed down to the groove and the strips then can be pulled out, allowing the ring to slip into the proper groove.



REMOVING OR REPLACING RINGS.

ADJUSTING VALVE CLEARANCE.

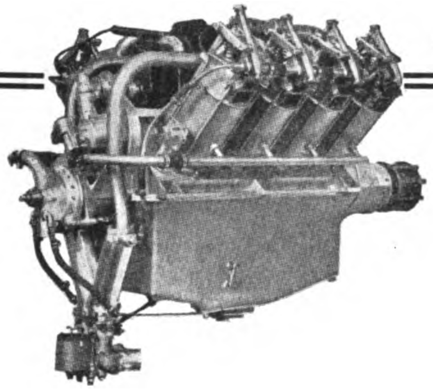
Valve clearance means the gap between the valve lifter and valve stem. This gap gradually increases, due to wear, and the engine becomes noisy on the account of the hammering of the valve lifters against the valve stems.

To adjust this clearance it is necessary first to run the engine until hot, so that all metal parts will have expanded. Next, place the piston on compression dead center. This can be done by turning the engine with crank until the intake valve is seen to open and just close; then feel into the cylinder with a wire or other small tool (through a port or spark plug hole). When the piston comes to the top it will be at the end of the compression stroke. This point is called compression dead center and both valves will be closed and the lifters down to the lowest points. Release the lock nuts and adjust the gap between the lifters and the valve stems of both valves to not less than 3-1000th or not over 10-1000th inch, or the distance the maker recommends. On tractors or large, heavy, low-speed wagons allow more clearance as there will be more expansion. Next, tighten the lock nuts and be sure they are tight, as the hammering action tends to loosen them. Proceed in the same manner in each cylinder separately until all valves are adjusted.

KEEP SPARE TIRE COVERED.

Two good rules as to spare tires are to keep them covered from sunlight, and to use each spare a day or two every month. Sunlight has a most harmful effect on rubber, whether the weather be hot or cold. Using the spare occasionally lengthens its life, for some reason which the scientist cannot explain.

"Pep Up" that Old Bus



With a Curtiss OX-5 Airplane Motor

The War Department is offering you a chance to make a regular speedwagon out of the old boat. Install one of these motors and it will do the rest. The Government is selling 3110 of them, and you can buy one or the entire lot. Of course, the more you buy, the cheaper the Government can afford to sell.

These motors will be sold as follows:
2542—New, at Little Rock, Ark.
568—Used, same storage.
Bids opened in Washington, D. C., June 29th, 3 P. M. (Eastern Time).

General description of this motor follows:
8 cyl., 4 cycle, 4 x 5, Vee type, water cooled; 90 H.P. at 1400 r.p.m.; high tension magneto, force feed oiling; Duplex Zenith carburetor; weight, 390 lbs. without oil or water. Installation dimensions: Length overall, 55⅜ in.; width, 29¾ in.; depth, 35⅛ in.; width at bed, 12⅞ in.; height from bed, 17¾ in.; depth from bed, 13¾ in.

Bids will be accepted on all or any part of the offerings, and no special form of bid is required. The Government reserves the right to reject any or all bids. For complete information, and in transmitting bids, address

Chief, M. D. & S. Sect., Air Service
Room 2624, Munitions Bldg., Washington, D. C.

WAR DEPARTMENT

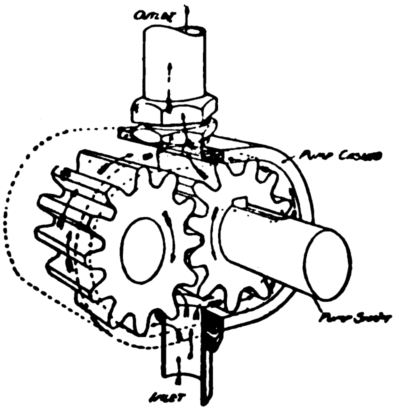
Motorists' Letter-Box

Motor West has access to a very complete collection of data, by means of which practically any question relating to automotive mechanical matters can be answered.

TYPES OF WATER PUMP.

Editor Motor West: I have trouble cooling the engine on long desert drives. Can I overcome this by enlarging my hose on the water inlet and replacing my centrifugal pump with a larger type gear pump? How does a gear pump work?—L. J. P., Phoenix, Ariz.

No doubt if your water pump is working and the fan running and the hose and radiator openings clear, your engine would cool itself. You must have some trouble on one of these parts. You can enlarge your hose connection to pump to give better circulation. A gear pump is the most positive and will give better circulation than a centrifugal pump. You will notice the operation of a gear pump in the illustration. It works the same as a chain pump in a cistern or well. The water enters the pump and each tooth fills and the water is carried around the outside of the gears and, not having room to return between the gears, is forced out through the outlet. Water cannot be forced back through this type of pump, but must go through the proper outlet.


Outlet
Pump Casing
Pump Shaft
Inlet

GEAR TYPE WATER PUMP.

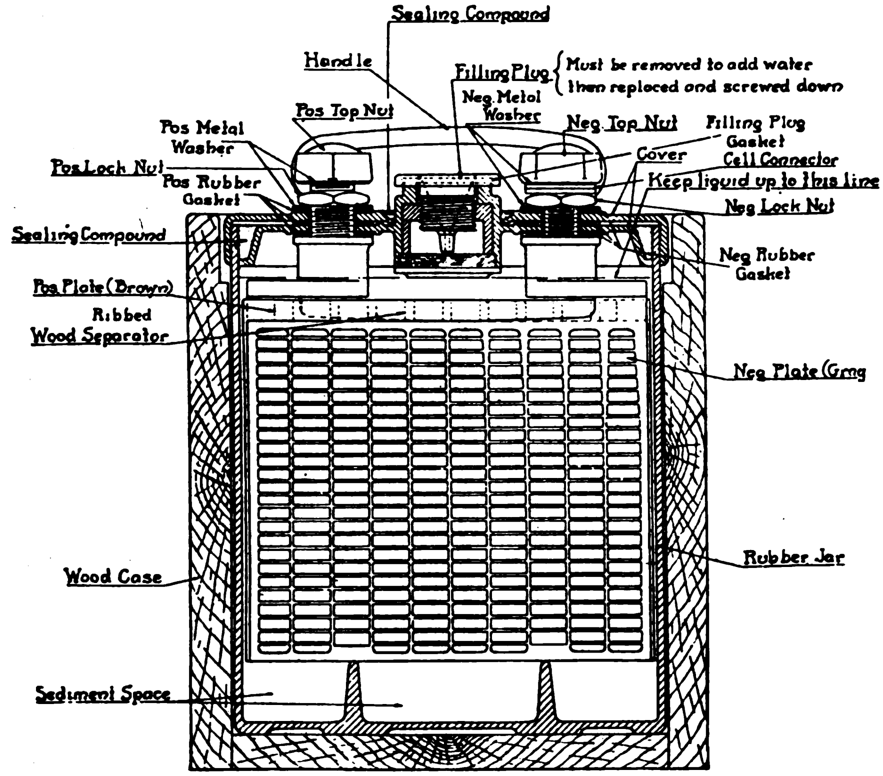
BATTERY CONSTRUCTION.

Editor Motor West: Please give me some information on the construction of my storage battery. Also on how to care for it.—H. L. N., Ada County, Idaho.

Your battery is made up of lead grids filled with chemical, the whole assembly called a plate. These plates are connected together by a strap or budge called a crowfoot, thus forming them into a group. There are two groups of plates to each cell, positive and negative. These groups are placed so the positive and negative plates come alternately. They are then sparated by thin sheets of wood, called separators.

The plate assembly is then placed in a hard rubber jar and the whole arrangement represents a cell. These cells are placed in a wood box and a compound of coal tar is melted and poured around and over the top of the cells. The posts from all positive plates are connected together; the negative posts also.

The battery should be kept well filled with water (distilled); kept fully charged and all connections on battery kept very tight. Battery must be kept rigid in its receptacle in the car at all times.

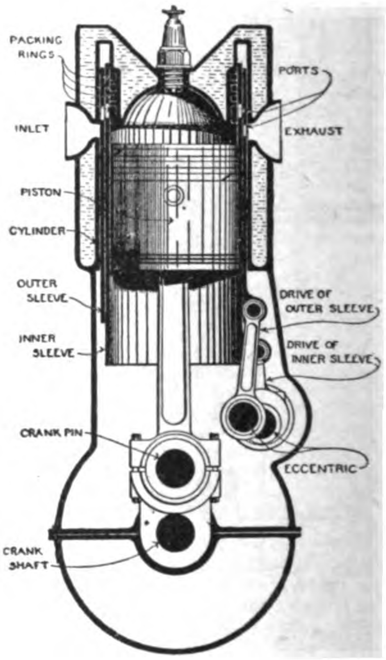

Sealing Compound
Handle
Filling Plug { Must be removed to add water then replaced and screwed down
Neg. Metal Washer
Pos Top Nut
Pos Metal Washer
Pos Lock Nut
Pos Rubber Gasket
Neg. Top Nut
Filling Plug Gasket
Cover
Cell Connector
Keep liquid up to this line
Neg Lock Nut
Sealing Compound
Neg Rubber Gasket
Pos Plate (Brown)
Ribbed Wood Separator
Neg Plate (Gray
Rubber Jar
Wood Case
Sediment Space

SECTIONAL VIEW OF A STORAGE BATTERY, WITH ITS COMPONENTS INDICATED.

SLEEVE VALVE ENGINE.

Editor Motor West: I would like to have some information on the sleeve valve type of engines. What manufacturers use this valve? I notice they run very quiet and with little vibration and can't understand how they operate.—S. L. T., Redding, Calif.

The sliding valve is used in Knight engines only, but different cars use that engine. As the illustration shows, there are two sleeves inside the cylinder. These sleeves are cylinders with both ends open, one sliding in the cylinder and the inner sleeve sliding inside of the outer sleeve. These sleeves are driven by eccentrics, or, in some cases, small cranks. The shaft carrying these eccentrics or cranks corresponds to the camshaft in poppet valve engines. The sleeves have ports on either side and when these ports come into line with the ports in the other cylinder wall the valve is open. When they go out of line the valve is closed. The valves open and close in the same position as in other types of engines. The cylinder head projects well down into the cylinder and the top edges of the sleeves slide in the space between the head and the wall. Between the inner sleeve and the head are rings similar to piston rings, which make a tight joint at the top of the sleeves, from the heat. These valves having a sliding motion, eliminate noise which is caused by the cam and lifter working against the end of the valve stem, giving a hammer action.


PACKING RINGS
PORTS
INLET
EXHAUST
PISTON
CYLINDER
OUTER SLEEVE
DRIVE OF OUTER SLEEVE
INNER SLEEVE
DRIVE OF INNER SLEEVE
CRANK PIN
ECCENTRIC
CRANK SHAFT

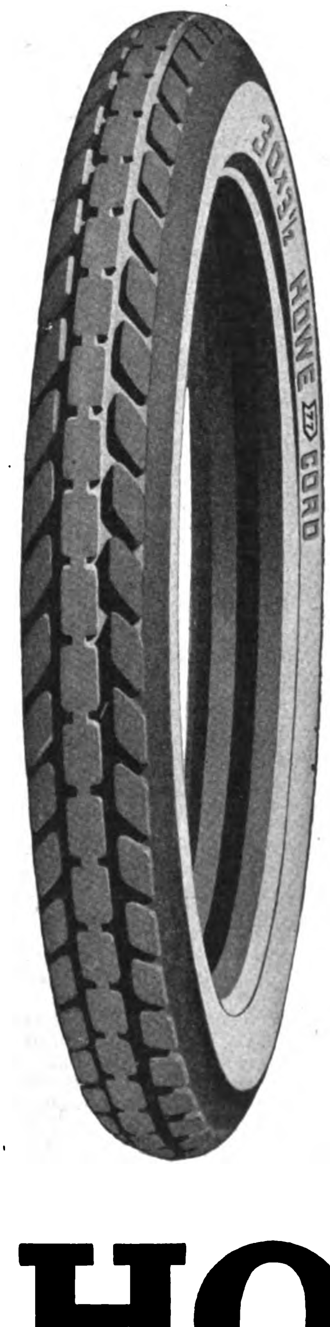
SLEEVE VALVE ENGINE.

TO FILL RADIATORS.

In filling the radiator, allow enough water to pass in to bring the water above the level of the vent pipe. If this is clear, as it always should be, fullness will be indicated by the overflowing of the water through it. If it is not clear the water will overflow through the filter cap, and not the vent pipe, which should then be attended to at once.

NEW CORD TIRE

30X3½ Clincher



77 HOWE MARK

The tire you want

Full size with heavy tread, strong side walls and a bead that is *guaranteed* to fit Ford rims. Sturdily built.

Back of it is the Howe reputation for building exclusively extra fine tires and tubes.

The list price and the profit are right. Dealers like both.

Send your orders at once to the nearest warehouse, or—

Write for full information on the new size and our proposition on the complete Howe line of tires and tubes.

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Cook Building, Cleveland, Ohio
O. R. Cook, General Sales Director
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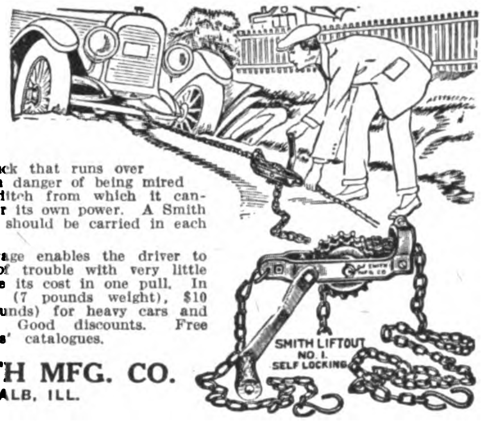
CORD AND FABRIC *and* HOWE RED TUBES

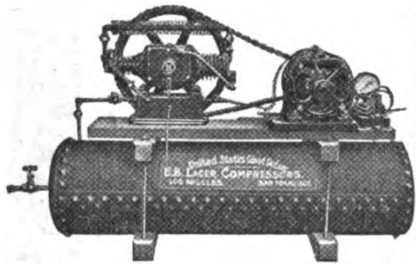
THE
SMITH
LIFT OUT
Car Puller

Every car and truck that runs over country roads is in danger of being mired or going into a ditch from which it cannot pull itself under its own power. A Smith Liftout Car Puller should be carried in each such car or truck.

Its enormous leverage enables the driver to pull his car out of trouble with very little effort. It will save its cost in one pull. In two sizes: No. 1 (7 pounds weight), $10 list; No. 2 (7 pounds) for heavy cars and trucks $20 list. Good discounts. Free electros for jobbers' catalogues.

C. F. SMITH MFG. CO.
DE KALB, ILL.





The same reliable U. S. Compressors.

Reliable 10 years ago.

More reliable Today.

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The best with patented features

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PIONEER
MOTOR TRUCK
LIMA, OHIO, U.S.A.

"The Recognized Standard of Quality"
A complete line from Speed Truck to 6 ton.

All attractively priced. Unusual selling features.
Strong dealer helps. Write for territory, discounts, etc.

THE GRAMM-BERNSTEIN MOTOR TRUCK CO.,
Lima, Ohio, U. S. A.

MORELAND
MOTOR TRUCKS

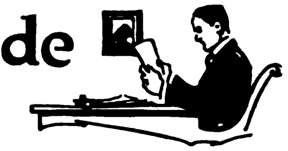
Built on Honor in the West and for the West
they are superior under its varied
and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST

Western Trade Notes



Seattle, Wash.—S. M. David has been made Seattle district manager for New York Lubricating Oil Co.—Hayes Northwest Co., 1406 10th Ave., has opened as Washington and Oregon distributor of Hayes shock absorbers.

Spokane, Wash.—Hipperson Radiator Co. and Federal Tire Co. have leased separate space in a new 1 story brick building, Monroe St. and 2nd Ave.—Walter Thompson, former used car manager for Sunset Motor Co., has bought Stutz Garage, 1312 1st Ave.

Concrete, Wash.—Hamilton Garage, operated by Harry Swettenam, and Donaldson Garage, operated by A. D. Donaldson, have been combined into Hamilton Garage, Donaldson's former quarters to be used as storage department.

Naches, Wash.—Huettner Brothers are building a new garage for their business, of tile facing and with 3500 square feet floor space.

Payette, Ida.—C. C. Hargrove, Ford agency, has bought the equipment and lease of Payette Modern Garage on 8th St.

Salt Lake City, Utah.—Western Motors, Inc., has been incorporated with $50,000 capital stock by G. H. Artman, R. S. Ricketson, J. F. Avery, and others.

Albuquerque, N. M.—White Garage, Oldsmobile agency, is having a new brick building erected for it, 4th and Cooper Sts.—M. A. Malone has taken over management of 4th St. Garage.

Phoenix, Ariz.—E. R. Hardy, former Willard factory representative on the Coast, has become general manager of Electrical Equipment Co., 312-16 N. Central Ave.

Tucson, Ariz.—Britsal Jones has opened a Franklin agency on East Congress St.

Glendale, Cal.—Maryland Storage Garage has opened on Maryland Ave. near Broadway.

Santa Monica, Cal.—Western Auto Supply Co. has opened an accessory store, 1418 2nd St.

Inglewood, Cal.—Higby & Hornaday on Commercial St. have opened with the Maxwell agency.

Huntington Beach, Cal.—W. D. Young and P. M. Clarke have bought Ford Agency from Talbert & Co.

Wilmington, Cal.—I. R. Atherton has bought Harbor City Garage from W. F. Burgess.—Harbor Service Station on Wilmington Blvd. has been bought by Charles Chapin from Summers & Haylett.

San Pedro, Cal.—C. B. King has bought San Pedro Rubber Works from E. L. McMahill.—Kolb & Boyd have moved their repair shop to larger quarters, 244 6th St.

Long Beach, Cal.—W. L. Bunge has opened a repair shop, 1850 E. State St.

Compton, Cal.—Wilburton Garage on Long Beach Blvd. has been bought from B. J. Wilburton by E. and G. Lloyd.

Lamanda Park, Cal.—Clarence Carpenter has opened Carpenter's Automobile Sheet Metal Works on East Colorado St.—George Anderson Auto Painting Shop is building a new and larger garage on East Colorado St., costing $10,000.

Alhambra, Cal.—L. H. Booth has taken the Oakland agency here and for El Monte and San Gabriel.

Montebello, Cal.—E. T. Cochrane has bought Central Garage from Art Chandler.

Sierra Madre, Cal.—J. Belohlavek & Son have opened Central Garage.

El Monte, Cal.—Lambert Motor Co., Ford and Lincoln car agency, has been bought by C. L. Bradford and C. S. Ranger.

Monrovia, Cal.—J. H. Terry, 613 S. Myrtle Ave., has been made dealer for Victor tires here by Bershon Tire Co., Los Angeles.—Thomas W. Bowker has bought Munro Garage on Myrtle St. from J. A. Munro.

Pomona, Cal.—Van Larimore has opened Larimore Garage on West 2nd St.

Upland, Cal.—Veeder C. South has bought M. D. Shannon's interest in Shannon & South Garage on Tenth St.

Belleflower, Cal.—R. E. Moore has bought one-half interest in Belleflower Garage from C. A. Conrad.

Whittier, Cal.—Tire Hospital, operated by Ladd & Boss, has taken the Woodbury tire agency.

Chino, Cal.—Simmons Brothers, Ross & Fryer have opened Chino Garage.

Roseburg, Ore.—C. O. Thomas and T. T. Hodge, Studebaker and Overland dealers, have erected Central Garage, reinforced concrete and fire-proof, 81x110 feet, on Rose St.

Newhall, Cal.—Stewart Thompson has opened Thompson's Vulcanizing Shop in a new building on the state highway.

IF you'd like to sell more tires — if you'd like to make more money—if you'd like to have fewer complaints—

Write for details of the Kelly-Springfield franchise. We believe it will give you what you want.

Kelly-Springfield Tire Co.

GENERAL SALES DEPARTMENT

250 W. 57th Street, New York, N. Y.

The Sign of Service

Ahlberg Ground Bearings

for Any Type of

Automotive Equipment

Reduce the cost of upkeep by saving the original parts.

Ahlberg Ground Bearings are bearings which have been in actual service and after becoming worn have been repaired. This is done by regrinding the raceways to their original contour and inserting new oversize balls and our own perfected retainer.

Our twelve years' experience in specializing in the repair of worn bearings has taught us how to do this work in a way that enables us to guarantee satisfaction.

There are thirty-five direct factory owned branches maintained at convenient points to give you service.

Take your old bearings to our nearest branch and exchange them for Ahlberg Ground Bearings.

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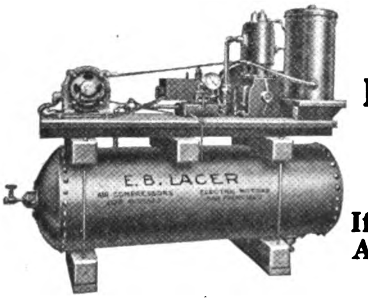
Cincinnati Cleveland St. Paul Columbus Dallas
Detroit Indianapolis Duluth Kansas City
Memphis Milwaukee Minneapolis Omaha Newark
New Orleans St. Louis New York Portland Oakland
Philadelphia Pittsburgh Providence San Francisco
Washington Toledo Youngstown



High Pressures Big Volumes

IS THE CALL TODAY

If it is Compressed Air 1 to 80 cu. ft. of air per min.

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A Permanent Job on Your Ford Car

Applicants are the ARG Auxiliary Spring and the ARG Fender Braces. They come highly recommended by thousands of Ford owners for whom they have cut down depreciation, added to riding comfort and prolonged the car's life.

The ARG Auxiliary Spring is a combination front spring protector and shock absorber, costing only $4.00. ARG Fender Braces, either front or rear, cost $2.50 and definitely end fenders cutting tires and rattling. Put these competent, reliable accessories to work on your commercial or passenger car *today!*

Be sure to ask your dealer for ARG accessories by name. ARG accessories must make good or we will.

ARG AUXILIARY SPRING CO. *Mfrs.* Birmingham, Alabama

SOUTHERN ENGRAVING AND COLORTYPE CO.

Our Artisans and Equipment Rank Second to None West of Chicago

ALL WORK GUARANTEED

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SCANDINAVIA

Trade Mark Registered in U. S. Patent Office.

BRAKE LINING FOR FORD CARS

SCANDINAVIA is woven from selected, long staple cotton on looms especially designed for FORD brake and transmission lining. Weighs 25 to 35 per cent more than other linings—which means more yarn, more body and more actual value.

Send for illustrated booklet and our Attractive Jobber or Dealer Proposition

SCANDINAVIA BELTING CO.
[illegible] Reade St., New York City
Branches—Atlanta, Cleveland, Los Angeles, Portland, Boston, Chicago, Easton, Pa., Pittsburgh, San Francisco

San Francisco, Cal.—Chas. H. Kaar Co., headed by Charles H. Kaar, Lexington car distributor, is now agency also for the Rickenbacker car, with sales room at Van Ness Ave. and Post St.—Pacific States Mfg. Co., capital stock $25,000, has been incorporated by R. W. Michael, C. E. Daehl, F. J. Evans to do an automotive repair business.—Martin Products Corp., capital stock $100,000, has been formed by B. M. Alkins, Edward Molkenbuhr, A. S. Hutchinson, to manufacture automobile accessories.—States Automotive Service Corp., to do a repair business, has been formed with $1,000,000 capital stock by H. W. Calhoun, V. L. Maxam, A. T. Salveson.—Dick Sunden, 10 years service superintendent for the Cadillac distributor here, has opened his own business, 300 Grove St., specializing on Cadillac repairing.—Auto Electric Air Feed Co., capital stock $75,000, has been formed by A. Johnson and S. E. Beckman.

Oakland, Cal.—C. W. Free, 1600 Harrison St., has taken the agency for Mac-Dry batteries in Alameda, Contra Costa, Sacramento and Stanislaus Counties.—Globe Auto Supply Co., holding company for California Auto Supply Co., has been formed with $500,000 capital stock by Maurice Copeland and associates, to finance the latter company's increasing business. —Lloyd Brothers, 1424 Harrison St., have taken the Gill storage battery for Northern California.

Berkeley, Cal.—Conley Battery Station has occupied its new building with 3960 square feet floor space, 2052 Center St., for its battery and ignition repair business and agency for Exide batteries and Bosch magnetos; constant potential battery charging apparatus has been installed and the shop is modern in every respect.

Emeryville, Cal.—Cozzen-Ball, Inc., capital stock $100,000, has been formed by R. H. and Rose E. Cozzens, C. H. Ball, H. M. Ball, to handle several lines of cars.

Vallejo, Cal.—American Camp Supply Co. has moved to 221 Georgia St., following a fire in its former quarters.—Vallejo Vulcanizing Works, M. E. Duncan manager, has moved to its new building, 441 Virginia St.—Dodgin & Dalwig, Dodge Brothers car agency, will have an $8000 garage built for it, Sonoma and Alabama Sts., and its former building on Florida St., will be taken over by Sauer & Guhl for their Studebaker service station.

San Rafael, Cal.—Lundquist & Kingsby have been made Marin County agents for the Liberty car.

Eugene, Ore.—Clyde Fisk, 10 years motorcycle dealer here, has changed to automobiles, taking the Franklin car.—R. J. Hawley has bought Easter & Mitchell Garage on Olive St., Gardner, Chandler and Cleveland car agency.

Pilot Rock, Ore.—Roy Brothers have opened a garage and repair shop, Main and Willows Sts.

Salem, Ore.—H. F. Bonesteele Motor Co. has bought ground on Commercial St. and will have a $25,000 sales and service building erected soon.

North Bend, Ore.—Harvey Gurnea will open Gurnea Garage, and Jennings Auto Co. a branch of its agency for Gardner, Jordan and Samson lines in the new North Bend Garage being completed at Washington and Sherman Sts.

Lynden, Wash.—Adrian Breen has moved his tire sales and vulcanizing business to larger quarters on 3rd St.

Olympia, Wash.—Capitol Motors Corp., Chevrolet dealer, has occupied a new garage, 5th and Franklin Sts., to cost $15,000.—Bronson Motor Car Co. will have a $20,000 sales and garage building erected for it at 6th and Franklin Sts., with 14,400 square feet floor space, and has sub-let space to Olympia Battery Co.

King City, Cal.—Alva Clement and Barlett Knox, forming Clement & Knox, have taken over King City Garage from L. B. Ulrey & Son, who will henceforth be Leach car distributors with headquarters in Oakland.—Tourist Garage has been opened by L. M. Newton, former manager of Midway Garage here.

Santa Maria, Cal.—J. W. Edrington, Broadway and Chapel St., has taken the Coast tire agency here.

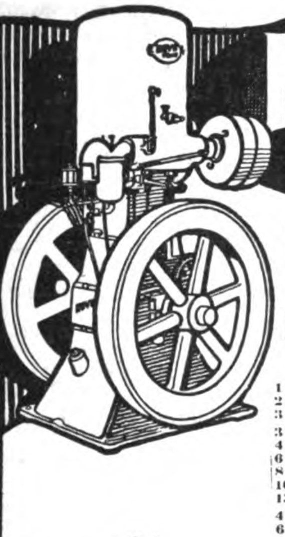
Santa Barbara, Cal.—Kirkpatrick Motor Co., Oldsmobile dealer, has moved to larger quarters, with Stockton Motor Co., Victoria and Anacapa Sts.

Oakdale, Cal.—Warren Watson has opened Warren Watson Accessory Sales Co. on Main St.

Merced, Cal.—Harold L. Peard has bought a half interest in Alderson Motor Car Co. and has taken charge of the machine shop department.—C. W. Savage has opened Savage Sheet Metal Works, 212 S. D St. for body and fender repairs. —Fleutsch & Lewis Motor Co. on 17th St. has been made Studebaker dealer in Merced County.

Riverbank, Cal.—Perrin & McMath Garage will be opened here by A .E. Perrin and Orion McMath in a new garage being built at Main and 3rd Sts.

Madera, Cal.—Daniels & Whitehouse have bought Yosemite Garage from G. S. Cheuvront, who will remain there concentrating on his Fageol truck and tractor agency; the new owners have taken the Coast tire and Luthy battery agencies.



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RELIABLE POWER

In Stock Here
and
Reasonably Priced

1½ h.p. Gasoline Engine	$ 70.40
2 h.p. Gasoline Engine	89.00
3 h.p. Gasoline Engine	101.00
3 h.p. Kerosene Engine	101.00
4 h.p. Kerosene Engine	182.00
6 h.p. Kerosene Engine	287.00
8 h.p. Kerosene Engine	333,00
10 h.p. Kerosene Engine	403.00
15 h.p. Kerosene Engine	682.00
4 h.p. Saw Rig Outfit	476.00
6 h.p. Saw Rig Outfit	561.00
6 h.p. Type "M" Hoist	737.00
10 h.p. Type "M" Hoist	874.00
6 h.p. Type "T" Hoist	538.00
10 h.p. Type "T" Hoist	675.00
4 h.p. "Handy" Hoist	330.00

Air Compressors,
Pump Outfits, Etc.

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SMITH-BOOTH-USHER CO.
Machinery, Industrial and Construction Equipment, Supplies
SAN FRANCISCO
50-60 FREMONT STREET
LOS ANGELES
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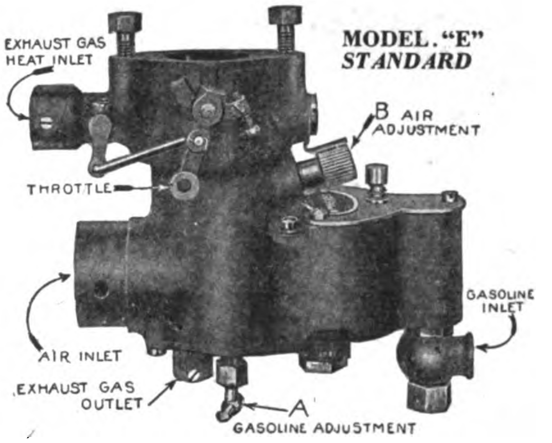

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GIVE
Universal Satisfaction
POWERFUL— ECONOMICAL— SIMPLE—

Write for our new Catalogue
MARVEL CARBURETOR CO.
FLINT, MICHIGAN, U. S. A.

Distributors:
Union Hardware & Metal Co., Los Angeles, Calif.
Motor Products Sales Co., Seattle, Wash.
Edwards-Warden Motor Parts Co., Salt Lake City, Utah

DENBY
MOTOR TRUCKS

REDUCED PRICES
Effective Jan. 1, 1922

	Was	Now
Model 31, ¾-1¼ ton Speedster	$1625	**$1485**
Model 33, 1½-2 ton	2300	**2145**
(Pneumatic tires used on above models)		
Model 34, 2 ton	2600	**2395**
Model 35, 2½-3 ton	....	**2795**
Model 27, 4 ton	4200	**3895**
Model 210, 5 ton	4850	**4295**
Model 214, 7 ton	5500	**4945**

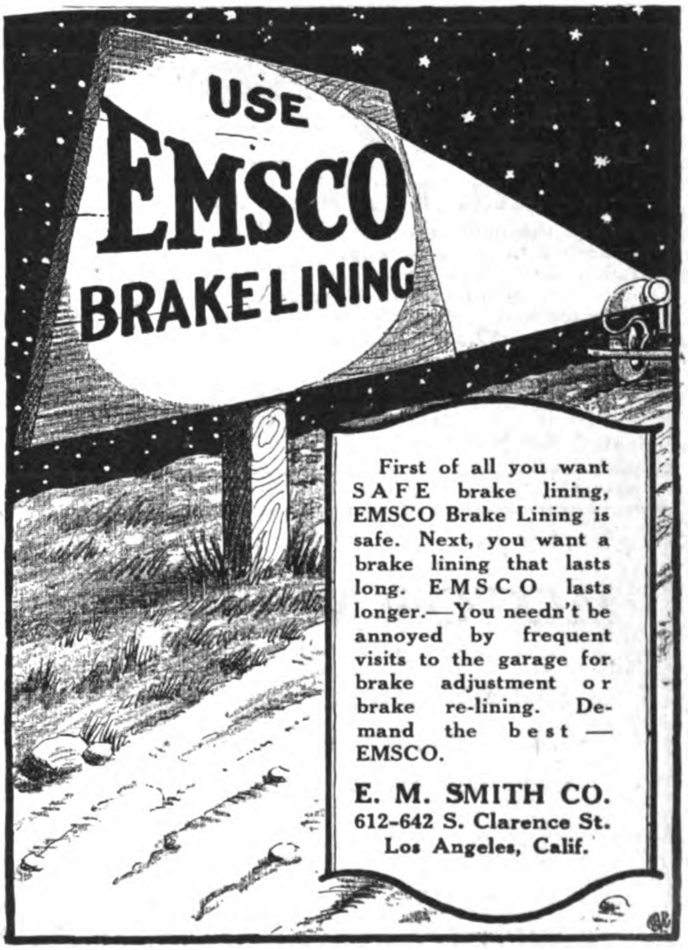
F. O. B., Detroit, chassis with seat

With rock bottom truck and service prices, the Denby line offers a very desirable factory connection to live dealers.

Write or wire for full details

LETS TALK BUSINESS AND GET BUSY

Denby Motor Truck Company
Detroit



First of all you want SAFE brake lining, EMSCO Brake Lining is safe. Next, you want a brake lining that lasts long. EMSCO lasts longer.—You needn't be annoyed by frequent visits to the garage for brake adjustment or brake re-lining. Demand the best — EMSCO.

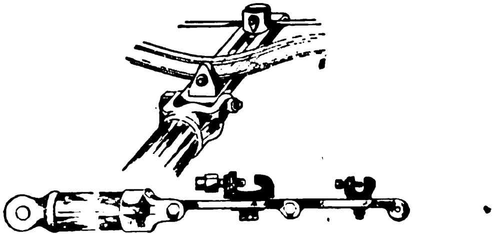
E. M. SMITH CO.
612-642 S. Clarence St.
Los Angeles, Calif.

HARWARD
ONE PIECE
HIGH POWER PISTON RING

For years this ring has been popular with the general public and many of the world's most famous racing drivers such as Eddie Pullen, Barney Oldfield, Roscoe Sarles, Harry Hartz, Eddie Hearne, etc.
Very liberal discount to the trade. Write for literature, prices, free samples and sales proposition.

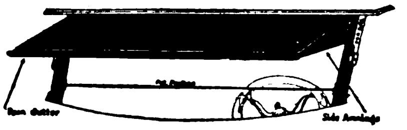
MEISENHEIMER & SMITH
Distributors for Southern California and Arizona
619 W. 10th Street Los Angeles, California

UNIVERSAL (REG) TOW-BAR (one man)
(Patented)



Attached to any make of car in a few minutes
Saves Time—Labor—Money
Buy now from your jobber—He has them
WALTER W. BIDDICK, DISTRIBUTOR
1318 South Figueroa Street, Los Angeles. Phone 23642

New
Era
De Luxe



ALL METAL VIZOR
Now is the time to sell this BETTER Vizor. It enables motorists to drive in safety day and night. Cuts off reflected shadows on arc-lighted roads and the blinding flash of headlights. Protects against sun glare. Patented rain gutter and side awnings. Easily adjustable. Price $7.50. Write for catalog.

New Era Spring & Specialty Co.
73 Cottage Grove Ave., Grand Rapids, Mich.
GRAF SALES COMPANY
Williams Bldg., San Francisco, Calif.

MOTOR WEST

Reaches a larger percentage of dealers and repairmen than any automotive trade publication circulated on the

PACIFIC COAST

Los Angeles, Cal.—H. E. Garrett has bought Stephenson Ave. Garage on Whittier Blvd. from J. A. Brown.—Rounsavelle Tire Co., retail dealer for Horseshoe and Convoy tires, headed by L. S. Rounsavelle, has been consolidated with Pacific Rubber Co., Coast distributor, Roy R. Meads, president.—Warren Mfg. Co., body builders, painters, and sheet metal workers, have occupied a fine new building, with 15,000 square feet floor space, 1405-07 W. Pico St.—Carl S. Frank has opened Frank Auto Repair Co., 1205 Formosa Ave.—Beaudry Garage, B. S. Lustig and Charles Bohrer owners, has been moved from 453 N. Beaudry St., to 1626 Temple St.—W. D. Candee's Fix It Yo'-Self Garage has been moved to larger quarters, 1015 S. Los Angeles St.—J. E. Coberley, Ford agency, has opened in its handsome new sales building, Washington and Los Angeles Sts.—J. A. Nadeau Co., authorized Ford, Fordson and Lincoln agency, has been incorporated for $100,000 by J. A. and R. E. Nadeau, M. J. Sopp.

Watts, Cal.—Foster & Foster have leased Field Garage, opening a Chevrolet agency.

Gardena, Cal.—Gail Kreis has bought Moneta Garage & Service Station from G. W. Andrews.

Torrance, Cal.—Rahm, Getman & Rahm have taken the Velie agency.

Huntington Beach, Cal.—Jack F. Gorham and Bill J. Elgar have opened an automobile washing and polishing station, Olive and Main Sts.

Sawtelle, Cal.—A. H. Wallick has opened Sawtelle Auto Specialty Shop on Santa Monica Blvd.

Venice, Cal.—C. W. Donnelly has opened a body and fender repair shop, Sunset and 3rd Sts.

Glendale, Cal.—Bartlett & French have opened at 248 S. Brand Blvd. as Hupmobile dealers.

Eagle Rock, Cal.—Tanner & Hall have opened a Buick agency on South Central Ave.

Lankershim, Cal.—Pollard & Illo have opened a Chevrolet agency in Phelps Bldg.

Van Nuys, Cal.—Stanley Twomey has taken the Stephens car agency.

Carpinteria, Cal.—H. M. Foster has sold his interest in Carpinteria Garage & Machine Shop to Grant Stutzman.

Ventura, Cal.—Art Caldwell has sold his interest in the Buick Agency to C. A. Appelman.

Santa Maria, Cal.—Alex Delassi has bought F. P. Hayes' interest in the Durant Sales Agency here.

Santa Barbara, Cal.—Hitchcock Motor Co., Packard and Durant dealer, has opened in its fine new building, State and Mason Sts., containing a sales room with 2500 square feet.

Manteca, Cal.—W. C. Tolle has opened with the Dodge Brothers agency in Travelers' Garage.

Fresno, Cal.—A. Meister & Sons Co. has leased a 2 story reinforced concrete building to be erected at 1924 H St.—Rasmussen Auto Electric Service has opened an automotive electrical repair shop and battery station in a new building, 1473 N. Van Ness Ave.—Berkeley Neustedt and A. B. Coronado have taken the Hupmobile agency for Fresno County.

Exeter, Cal.—E. R. Motor Co. on Pine St. has been bought by Carl Kroells, who has changed it to Central Garage and taken the Ford agency.

Clovis, Cal.—W. M. Smith Co., handling machine repair work, has been opened on Third St. by W. M. Smith.

Turlock, Cal.—I. C. Barrows and G. A. Light have bought Turlock Vulcanizing Works, Federal tire agency, from J. E. Smith.—Carl Anderson has bought a half interest with his brothers, A. L. Anderson, in Automotive Electric Co. on South Center St.—Chevrolet Garage has leased the ground floor of a 2 story brick building to be erected at Center St. and Crane Ave.

Visalia, Cal.—Western Auto Supply Co. has opened a store at 400 East Main St.—Bill Richards, Paige and Jewett car dealer, has moved from Campbell's Garage to larger quarters, 416 Main St.

Grants Pass, Ore.—Grants Pass Auto Co. has been formed by M. H. Hutchinson and J. H. Denison, 310 N. 6th St., as Buick dealer and White truck sales and service agency.

Brownsville, Ore.—Howe Garage, destroyed by fire in 1919, will be rebuilt of concrete.

Oregon City, Ore.—Bob Pelky and Al Hughes have opened a garage and repair shop in the former Pacific Tire & Supply Co. building.

Salem, Ore.—F. W. Pettyjohn, former Gardner and Jordan car agent at Silverton, has moved his headquarters here, 217 State St., continuing his Silverton branch.

Astoria, Ore.—Astoria Tire Service Co., George Benness, manager, will have a new building with 12,000 square feet floor space erected for it on a site to be announced later.

North Powder, Ore.—North Powder Garage with 6000 square feet floor space has been leased by E. L. Ledbetter.

Tacoma, Wash.—Pacific Electric Machinery Co. has taken the Gill battery agency for Western Washington.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON RINGS PISTON RINGS

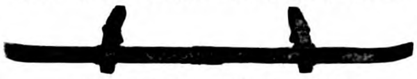
JOBBERS and DISTRIBUTORS
Ask Us Why You Should Sell
OIL KING PISTON RINGS
DYGERT & SIEMERS
Chamber of Commerce Bldg
Los Angeles, Cal.

Complete Satisfaction Guaranteed above all other Oil Rings

SPRINGS

CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS

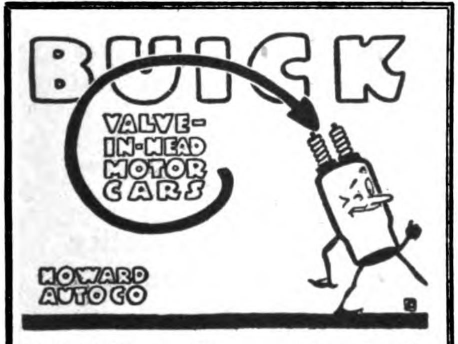
"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof



FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
Pacific Coast Distributors
Madison "Oil Kipps"

Main 3733. 916 So. Los Angeles St.

AUTOMOBILES



1323 S. Flower St. Los Angeles

LUBRICATING OILS

See Signature of C. C. Bogardus on Can

At Your Dealer's
FOR YOUR MOTOR'S SAKE
USE
UP-CYL OIL
UPPER CYLINDER LUBRICANT
IN YOUR GASOLINE
MORE POWER
NO CARBON
At Your Dealer's

For lubricating all upper parts of a motor, such as the valves, guides, valve stems, seats, cages, upper cylinder walls, and the sealing of the combustiton chamber with a fine film of oil by vaperisation.

WEST COAST SUPPLY CO.
909 S. Grand Ave. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

PISTON RINGS

THE RING THAT CURES oil burning motors after others have failed is the genuine and original Oil Kontrol piston ring made by Sunset Mfg Co., L. A. Look for the name, beware of imitations. Jobbers and Distributors write for territory

SUNSET MFG CO., 1328 E. 6th St., Los Angeles, Calif.

Moon Export Business Good.

E. H. Serrano, director of exports for Moon Motor Car Co., St. Louis, reports foreign shipments for April exceeded those of any one month since July, 1920, and that from all indications, May would show a further increase, as the company had enough unfilled orders to exceed April shipments fully 100 per cent.

Mr. Serrano further says this business is fairly well scattered, although Mexico is the best market. Quantity shipments are being made to Spain, Canada, Sweden, Canary Islands, Australia and Argentina.

The company is in an enviable position to handle export shipments. Cars are boxed at the plant and shipped via the Government-owned barge line down the Mississippi to New Orleans, where they are loaded aboard ocean steamers. Thus shipments are entirely by water.

Later, the Moon Co. reports its sales for May were 126 per cent better than for May, 1921, and 78 per cent better than in May, 1920. The previous record month was June, 1920, and this May's business exceeded that by 64 per cent.

Even with production nearing the 50 cars per day mark, unfilled orders on hand have increased until today they exceed by 25 per cent the unfilled orders the company had on hand the first of May.

* * *

Change of Name.

Automotive Accessories, Inc., Kokomo, Ind., has changed its name to Kokomo Automotive Mfg. Co. There is no change in the personnel. The company makes windshield wings, mirrors, curtain light glasses, and other mirror and glass specialties.

* * *

Receiver for Commonwealth Co.

A receiver has been appointed for Commonwealth Motors Co., Chicago, by Federal court, upon application of a number of creditors whose claims aggregate $35,000. The company was organized a few years ago to manufacture the Commonwealth car, which later was discontinued. Recently the company has been manufacturing taxicabs at its plant at Rockdale, near Chicago. The material on hand and the contracts of the company have been sold by the receiver to the Checker Mfg. Co., manufacturing Checker taxicabs.

* * *

Pushing B-N Piston Pins.

William M. Reynolds has given up his job as a manufacturers' representative, and will confine his efforts exclusively to traveling in the interests of Burgess-Norton Mfg. Co., Geneva, Ill.

In connection with two other road men now spending most of their time as specialty salesmen, assisting the jobbers, and with the manufacturers' representative, A. H. Doveney, covering the Southern and Southeastern territory, B-N piston pins, manufactured by this concern, should show a considerable increase in sales during the next six months. The company's policy, adopted at the beginning of this year, is to assist its jobbers in every way possible in the sale of this well-known replacement part.

* * *

Old Adria Officials Back.

When Timothy J. Dailey and his son, Harry, took charge of the plant of Adria Motor Car Corp., Batavia, N. Y., it was understood they would pay the creditors and put the plant in operation. The way matters have gone has resulted in another reorganization, and return of Louis M. Vremsak as president and Willard C. Wheeler as treasurer; and Alexander Gray, of Ontario, also has returned to Batavia. Most of the 600 stockholders reside, in or near that city.

* * *

Rubay Expected to Produce a Car.

Leon Rubay, long known as a designer and producer of fine automobile bodies, is expected to add production of a car to his record. It is said the car will have as distinctive features in its chassis as those in bodies Mr. Rubay has designed. The design follows European practice, with light weight and ample size as features.

* * *

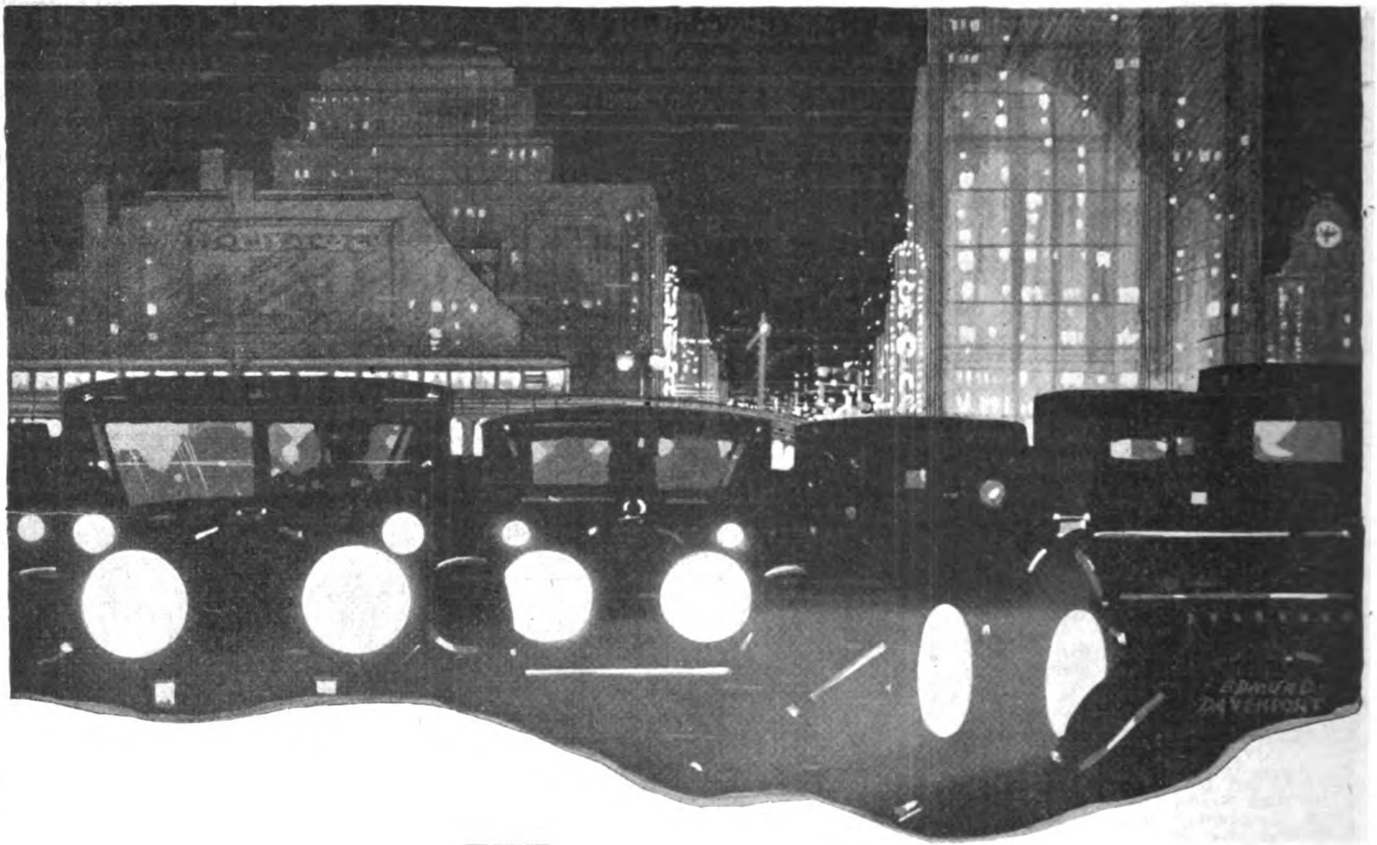
Wallace Heads Perfection Spring.

W. H. Wallace has been appointed sales manager of Perfection Spring Co., Cleveland, to succeed H. E. Figgie, resigned. Mr. Wallace has been with the company several years as sales engineer.

* * *

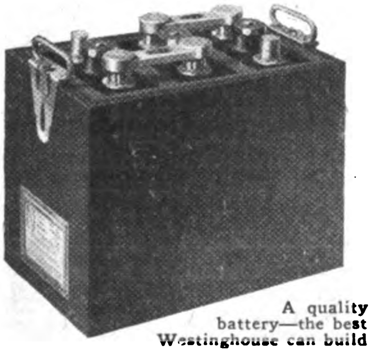
Colvard at Delco Factory.

S. W. Colvard, who recently traveled the Pacific Coast territory as service representative of Dayton Engineering Laboratories, Dayton, O., has been transferred to the factory to become sales engineer, succeeding Frank W. Edwards, deceased.



RADIO

has opened a vast added field for battery sales. Westinghouse Radio Batteries, "A" and "B," sell readily because they have the quality a radio battery must have for best results.



A quality battery—the best Westinghouse can build

WESTINGHOUSE gives its distributors, dealers and service station operators these sound tools to work with:

THE PRESTIGE of association with an organization for fifty years linked with successful undertakings and meritorious products. Westinghouse Air Brakes and automatic railway signals, for example.

A BATTERY that in every way must—and does!—uphold the fame of the name it bears.

A BATTERY GUARANTEE unexceeded in liberality and absolutely unique in the convenience to the customer with which its provisions are carried out.

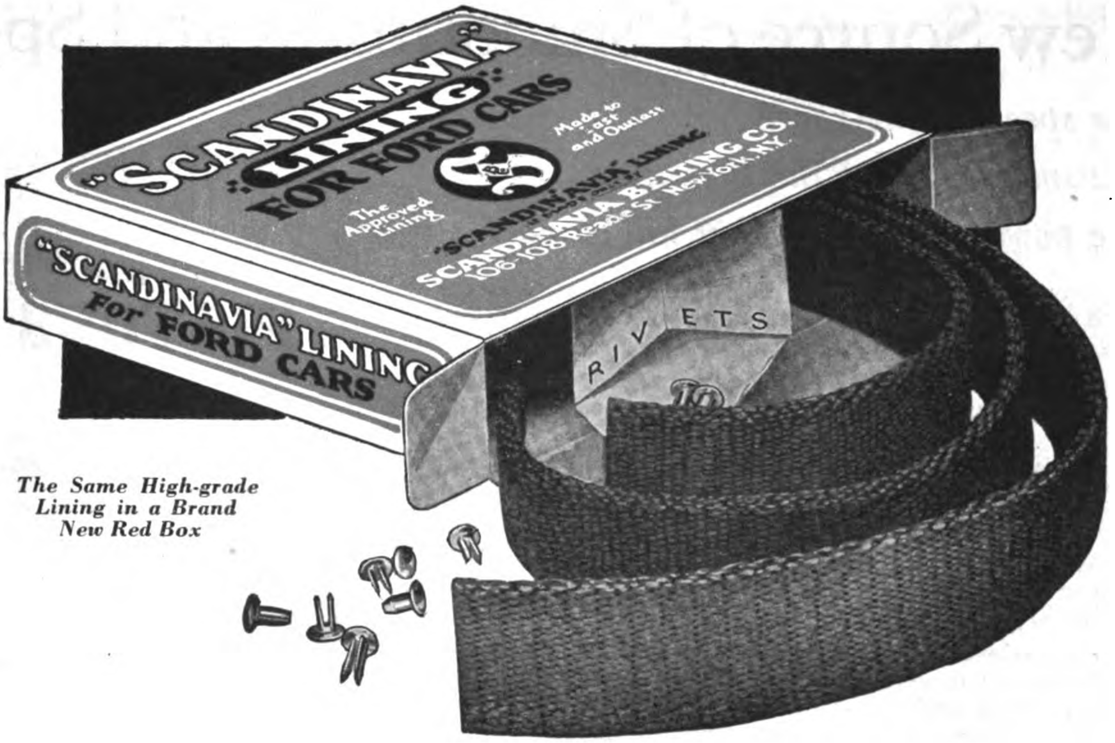
A BATTERY SERVICE—known as Westinghouse Attention—based upon standards that assure the operator a business of permanence and steady growth.

With support like this, and his heart set, a man can make a fine thing out of a join-up with Westinghouse. Good battery men can get the whole story by addressing

WESTINGHOUSE UNION BATTERY COMPANY
SWISSVALE, PA.

WESTINGHOUSE
BATTERIES

Please Mention "Motor West" When Writing to the Advertiser


"SCANDINAVIA"
LINING
FOR FORD CARS
The Approved Lining
Made to last and Outlast
"SCANDINAVIA" LINING
SCANDINAVIA BELTING CO.
106-108 Reade St New York, N.Y.
"SCANDINAVIA" LINING
For FORD CARS
RIVETS

The Same High-grade Lining in a Brand New Red Box

Scandinavia Brake Lining is Made Especially for Ford Cars

SCANDINAVIA has become the accepted lining for FORDS, because it has proven itself to be a lining that will deliver 100% service during a long life of hard usage.

Woven from selected, long staple Southern cotton on looms especially designed for FORD brake and transmission lining. SCANDINAVIA weighs 25 to 35 per cent more than other linings—which means *more yarn, more body* and *more actual value.* Especially impregnated, processed and hardened (to resist heat, oil and grit and yet remain sufficiently pliable) to prevent chattering or glazing.

SCANDINAVIA is put up in convenient boxes with the necessary solid brass rivets for fastening to the bands. Cut into three equal-length pieces for Low and High Speed, Reverse and Brake Bands.

Write for Our New Folder "How to Change Ford Brake and Transmission Linings." We Have an Attractive Proposition for Jobbers and Dealers.

SCANDINAVIA BELTING CO.

106-108 Reade St., New York, N. Y.

BRANCHES:

Atlanta	**Boston**	**Chicago**	**Cleveland**
Easton, Pa.	**Los Angeles**	**Pittsburgh**	**Portland, Ore.**

A New Source of Smoothness and Speed

—the speed of the racer

—the smoothness of the limousine

—the power of the sturdiest hill-climber

DOWMETAL

PISTONS

If motorists would stop to think why pistons are put into a motor there would soon be a revolution against the waste and wear and discomfort caused by the old style pistons.

The piston in a motor-car serves but one purpose. It catches the force of the explosion and carries it to the connecting rod to drive the car.

So, any weight in a piston beyond that necessary to withstand the force of the explosion and transmit the power—is useless, needless weight—power-wasting and speed-reducing.

Until DOWMETAL was perfected, pistons were wastefully heavy because no light-weight metal had been found that would stand the shock, and transmit the power.

DOWMETAL, a development of Dow Chemistry, is lighter even than aluminum and it weighs but one-fourth as much as cast-iron. It has strength and non-scoring properties not found in any other light-weight metal, yet is the toughest of all.

Now Vibration is Conquered

Power need no longer be wasted in the destructive vibration caused by jerking and pushing heavy pistons.

A change to DOWMETAL gives you the power for hill-climbing and heavy-going because they make available the power that heavy pistons use up.

> Miami, Fla., March 25, 1922.
>
> The Dow Chemical Company,
> Midland, Michigan
>
> Gentlemen:—
>
> You mention my confidence in your product, this amuses me. I don't believe that you fellows up there half realize what a wonderful change these pistons make in a 4 cylinder motor. I did not till I got so close to the subject. Now I know that they can be made as flexible as any 6 or 8.
>
> Have installed them in several motors and the results were astounding. They are the talk of the town. When one can drive a motor like that in a Dodge and Ford at two miles per hour IN HIGH as smooothly as an electric and jump it up to 30 in 100 feet without any bucking, it's pretty near perfection.
>
> The flexibility and pick-up can not be excelled by any car, at any price, in fact, one no longer needs a 6-8 or 12 cylinder motor to enable them to get all of the desirable results that we have previously thought could only be procured at an expenditure of from $3,000.00 to $6,000.00.
>
> I predict national homage for the Dowmetal Piston.
>
> Sincerely yours,
> Signed L. N. PERRAULT

DOWMETAL Pistons make old cars new and new cars better and in every case DOWMETAL gives a noticeable addition to speed, a marked reduction in vibration and a smoothness of operation that any motorist will recognize instantly.

Write for illustrated folder

THE DOW CHEMICAL COMPANY
Midland, Michigan, U. S. A.

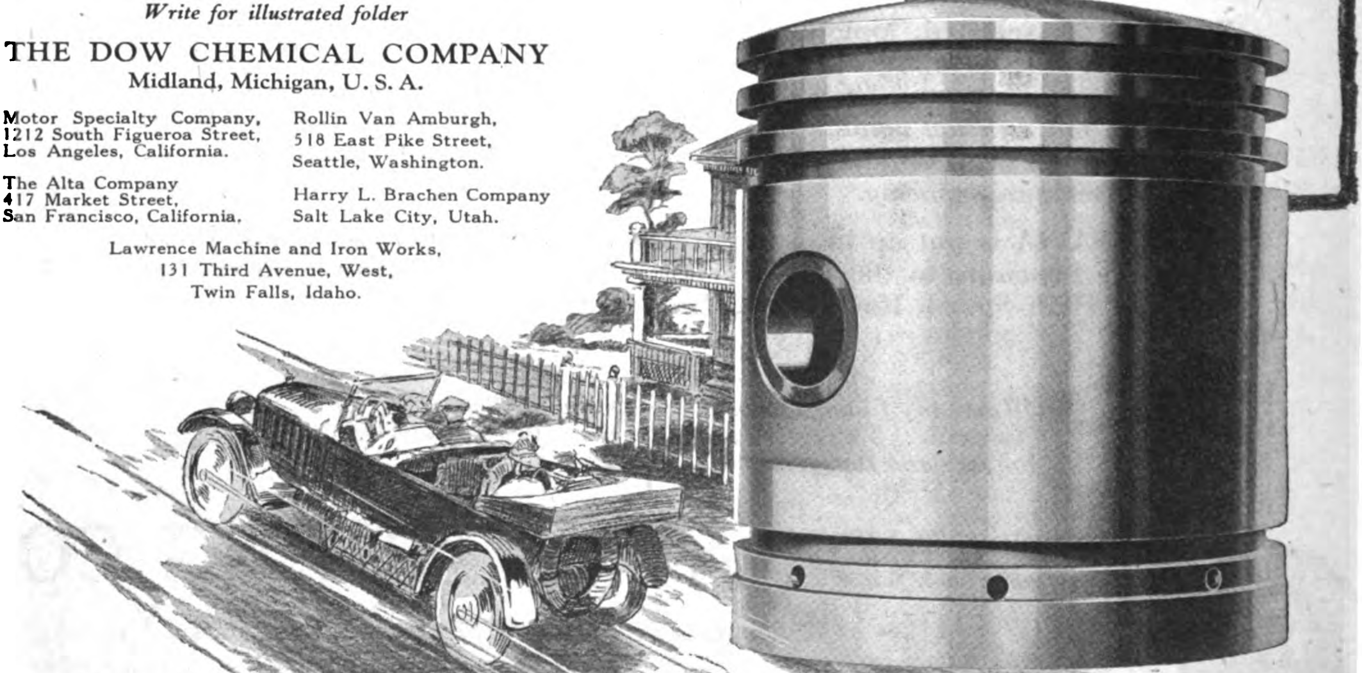
Motor Specialty Company,
1212 South Figueroa Street,
Los Angeles, California.

Rollin Van Amburgh,
518 East Pike Street,
Seattle, Washington.

The Alta Company
417 Market Street,
San Francisco, California.

Harry L. Brachen Company
Salt Lake City, Utah.

Lawrence Machine and Iron Works,
131 Third Avenue, West,
Twin Falls, Idaho.



THE DOW CHEMICAL COMPANY TRADE DOW MARK *Midland Mich U.S.A.*

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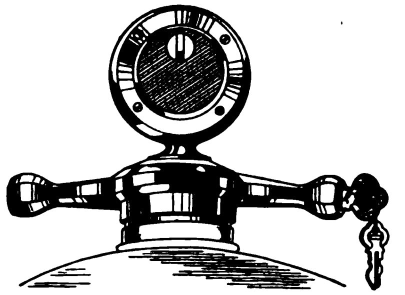


The wary thief passes up the Moto-Meter that's protected by a

Fletcher

Motor-Meter Lock

$6.50 everywhere

There's Absolutely no way to remove the cap without the individual key

Harry F. Joy & Co.,
1311 S. Figueroa St., Los Angeles
C. H. Diehl Specialty Co.,
612 Van Ness Ave., San Francisco
Alemite Lubricator Co.
10th & Oak Sts. Portland
312 Pike St. Seattle
1229 W. Sprague, Spokane

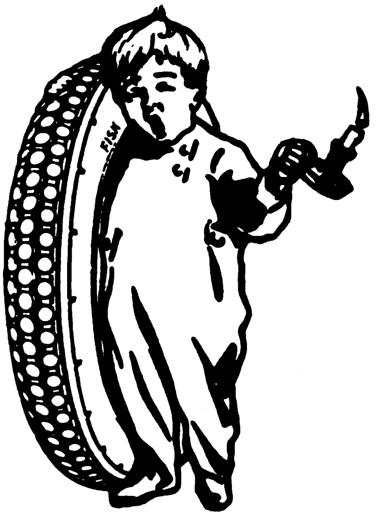
Distributors Fletcher Motor-Meter Locks

Use Motor West

¶ Every Eastern automobile or accessory manufacturer can help his Pacific Coast representative increase his sales by a liberal use of the advertising columns of MOTOR WEST.

¶ Coast dealers and factory representatives should insist on the factory folks giving them the same advertising support in "The Motoring Authority of the Pacific Coast" as is accorded the Eastern and Middle Western dealers and representatives in the motor trade journals published and circulating almost exclusively in those sections. Otherwise the dealers and representatives here, who pay their proportionate share of the expense of advertising in the Eastern and Middle Western journals (and incidentally receiving very little benefit from it) are paying for something they do not get.

THINK IT OVER!



Trade Mark Reg. U. S. Pat. Off.

Time to Re-tire?
(Buy Fisk)

The best-known tire trade-mark in the world

WHEREVER magazines, farm papers, trade publications and newspapers are read, the Fisk Time to Re-tire Boy is known—a sleepy-eyed youngster with a tire over his shoulder, a candlestick in his hand—

The billboards have given him a nation-wide picturization.

In New York, Chicago and Detroit, he commands the skyline, day and night, on huge electric signs.

In moving picture theatres he's on a slide that tells the audience "Good-Night."

In kindergartens, church socials, costume parties, carnivals, etc., his is the character chosen by many maskers.

This widespread publicity and friendly recognition given to the Fisk Time to Re-tire Boy makes it a trade-mark of advantage beyond the ordinary value.

Without cost to you this asset may be most productive if you qualify as a Fisk dealer and make use of the many reproductions of the Time to Re-tire Boy which will be available to you.

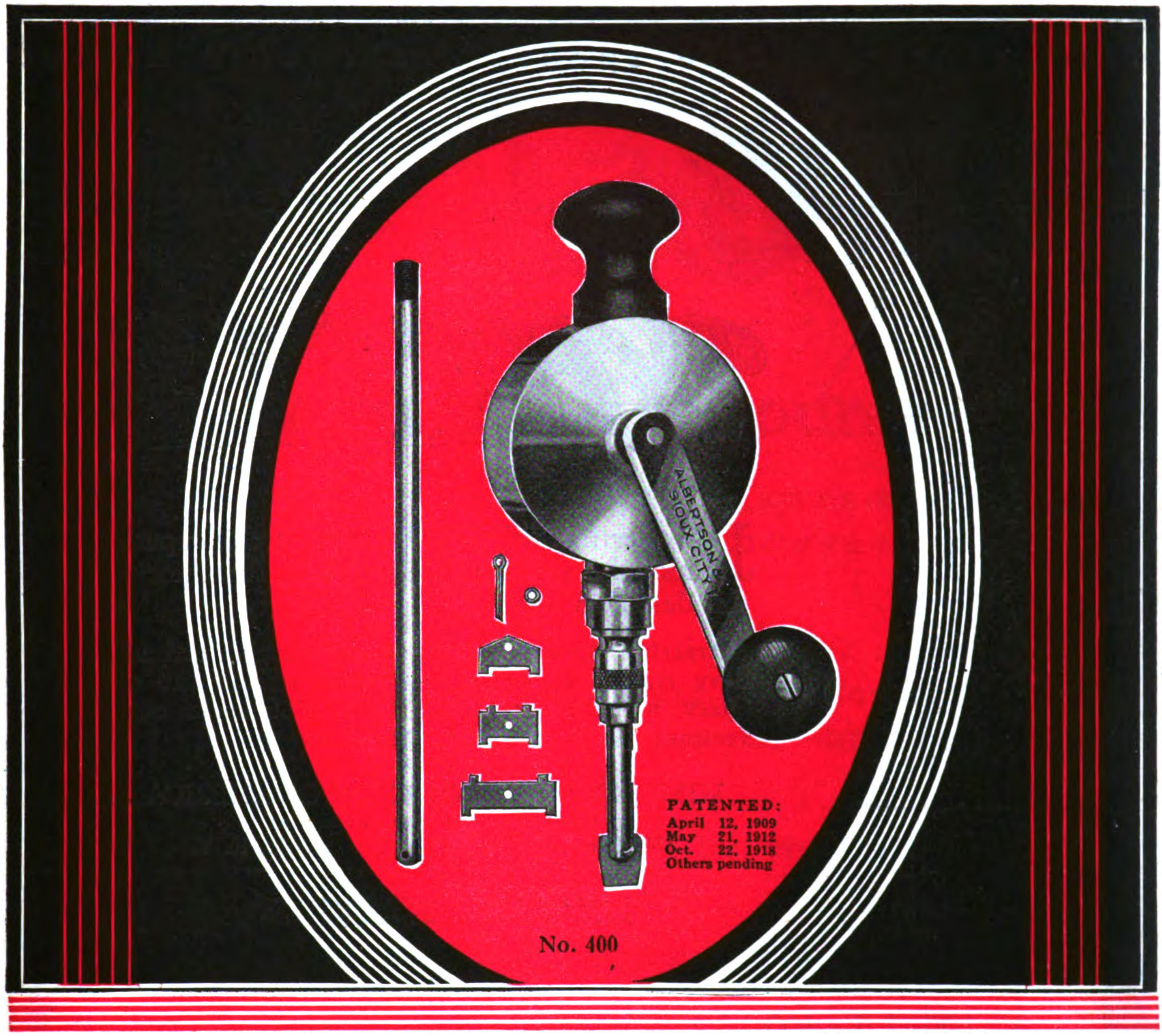
Put it in your window, on your walls, in your local advertising, on your stationery—and you will see quickly and surely how this great trade-mark will help you do business at a profit.

There's a Fisk Tire of extra value in every size
for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.

Chicopee Falls, Mass.

FISK
TIRES


ALBERTSON & SIOUX CITY
PATENTED:
April 12, 1909
May 21, 1912
Oct. 22, 1918
Others pending
No. 400

SIOUX
Trade Mark Reg. U.S. Pat Office

Grinds correctly and quickly. You'll find them everywhere, in garages the world over—giving the utmost satisfaction.

The simple mechanism and the impossible-to-wear-out parts produce that reciprocating, or back and forth motion on the valve, so necessary for perfect valve grinding.

Your Jobber Sells Them

ALBERTSON & CO. **SIOUX CITY, IOWA**

SIOUX VALVE GRINDER

five wheels, triple spoke, detachable at hub

WIRE WHEELS

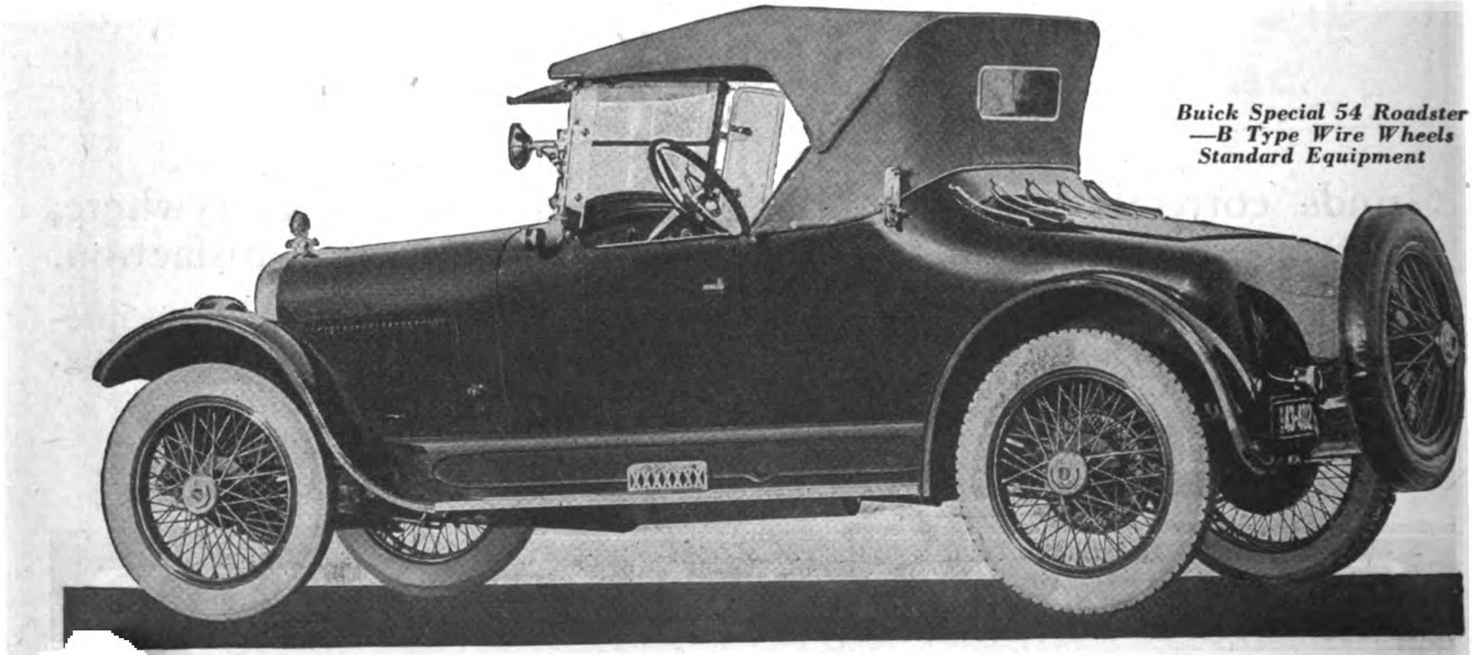
BY selecting WIRE WHEELS for this superb model—the Buick Special 54 Roadster—the designers assured:

Attractive appearance. Easy riding qualities. Quick tire change convenience.

Greater strength and additional safety, due to the TRIPLE spoke construction.

WIRE WHEEL CORPORATION OF AMERICA
(Successor to Houk Manufacturing Co.)
1700 Elmwood Avenue Buffalo, N. Y.

Direct Factory Branches, Distributors and Service Stations in all principal cities.



Buick Special 54 Roadster —B Type Wire Wheels Standard Equipment

REO

Oversold—Of Course

Just now Reo cars and Speed Wagons are no exception to the general rule—there's a shortage, and anything is salable.

But—sooner or later we will get back to the condition where the buyer will demand quality in every part of his car—and full value for his every dollar.

Those are Reo days—when buyers discriminate and when quality tells.

That's when a Reo franchise is of most value.

Those conditions also bring into bolder relief the weaknesses and the strengths of distributors and dealers.

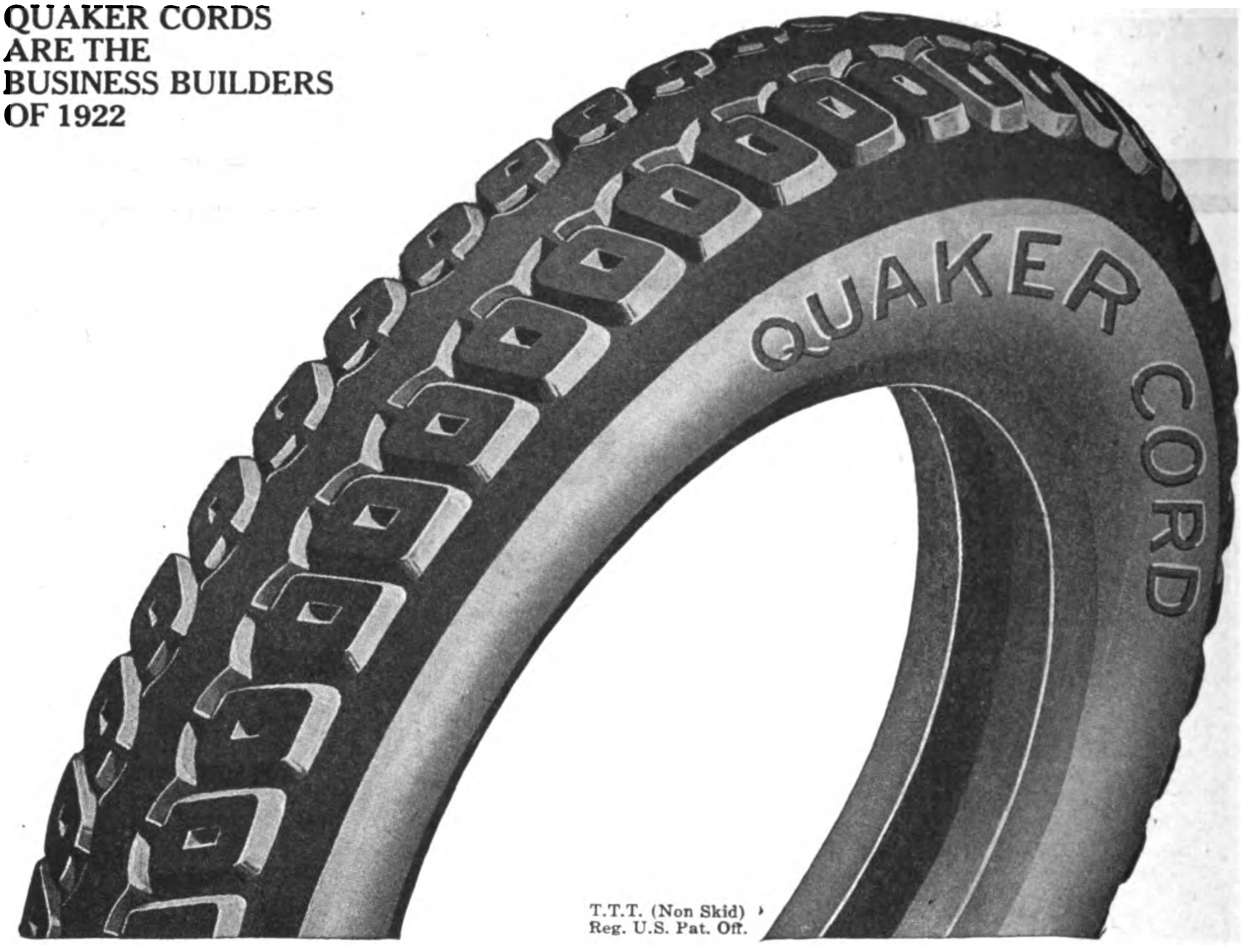
Logically, only the best and most far-sighted dealers should hold the Reo franchise.

You and we, are therefore journeying toward the same goal.

Reo Motor Car Company, Lansing, Michigan

Los Angeles Branch, Cor. 12th & Hope Sts. San Francisco Branch, 1730 Van Ness Ave.

QUAKER CORDS
ARE THE
BUSINESS BUILDERS
OF 1922



T.T.T. (Non Skid)
Reg. U.S. Pat. Off.

The Cord Tire which holds the Dealer's Customers

QUAKER CORDS do more than give the fullest service to car owners; they actually bring more customers to dealers.

The quality is in the tire and this is easily proved. And back of the name Quaker is the gilt-edge and world-wide reputation of its makers.

Dealers who are determined to build up a big business this year and have it continue from year to year, should write for our dealer proposition without delay.

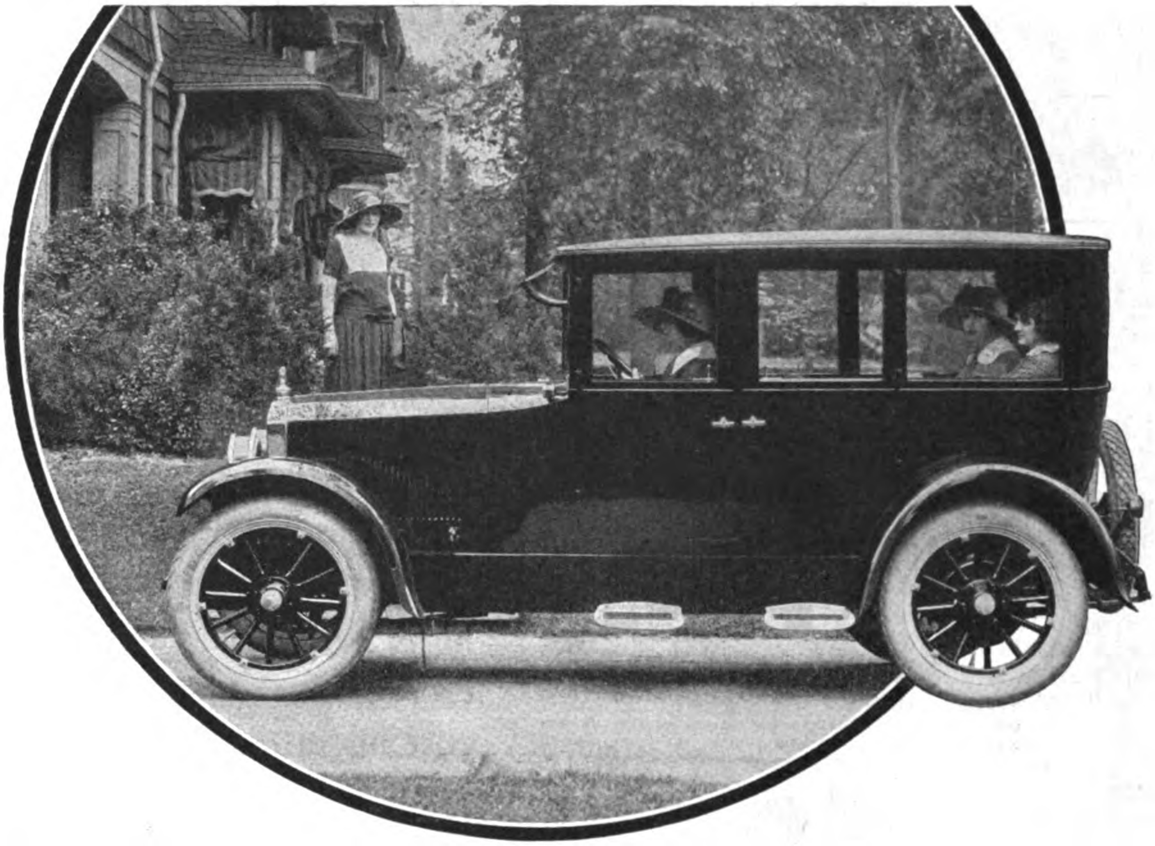
QUAKER CITY RUBBER COMPANY

Established 1885 **Factories—Philadelphia**

Philadelphia	Chicago	Pittsburgh	New York
624-26-28 Market St.	217-221 W. Huron St.	211 Wood St.	53 Murray St.

Pacific Coast Office, 304 Williams Building, San Francisco

CLEVELAND SIX



A New Sedan of Exquisite Style

TWO facts explain the remarkable success of the new Cleveland Six—it is one of the few really new cars of the year and one of the even fewer cars in which a marked lowering of price has been accompanied by equally marked raising of quality.

The exquisitely beautiful Cleveland Six Sedan compares with closed cars costing hundreds of dollars more. Few cars, at any price offer such new, smart style, such rich appointment, such lasting quality. The body is Fisher-built.

The chassis is equally advanced in design. The exclusive Cleveland Six overhead valve motor is not excelled for power, flexibility, smoothness, economy in the light six field. Thousands call this new sedan the Wonder Car of the Year—and beyond any question it is *today's best buy in closed cars.*

$1595

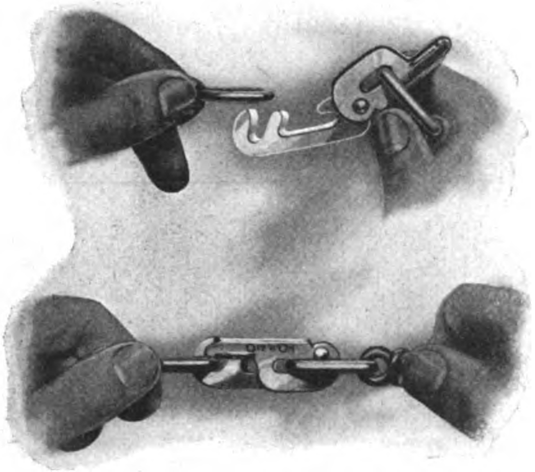
TOURING CAR $1195
F. O. B. Cleveland

Dealer inquiries are welcomed. Your territory may not be permanently closed. Write the factory.

CLEVELAND AUTOMOBILE COMPANY · CLEVELAND
Export Dept: 1819 Broadway, New York City
Cable Address: "CLEVE-AUTO"

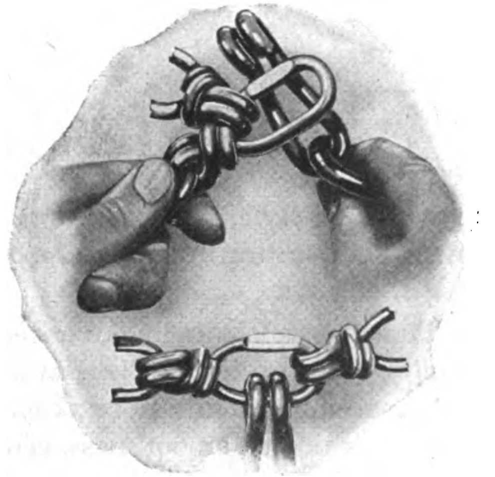
OFF'N'ON CHAINS

They're Time Savers
That's why they sell



The Positive Lock

The patented lever lock makes it easy to put them on and take them off. It takes up slack, thus saves wear on tires and chains alike. No lost chains—no loose chains. OFF'N'ON has a positive locking device.



The Slip-On Link

The patented slip-on link makes it easy to take off worn-out cross chains and put on new ones. A child can do it. OFF'N'ON chains, with these special devices, cost no more.

TO show OFF'N'ON Chains to a customer means a sale.

He sees the big features at once: the positive lock—the simple slip-on link. No more lost chains—no more lost time changing cross chains. And yet they cost no more.

Dealers should place their fall orders early so that jobbers can estimate their requirements and protect dealers on delivery. Order spare cross chains—an extra set can be sold with every chain.

Write us for circular and price list, giving the name of your jobber

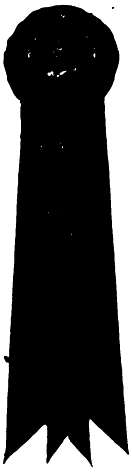
PYRENE MANUFACTURING COMPANY
Makers of Pyrene Fire Extinguishers
520 Belmont Avenue, Newark, N. J.

BRANCHES:

CHICAGO	ATLANTA	KANSAS CITY	SAN FRANCISCO
17 So. Jefferson Street	24 Nassau Street	1712 Grand Avenue	977 Mission Street

America's Blue Ribbon Sport Car.

The HAYNES 75 SPEEDSTER



A blue ribbon attached to the steering wheel of the Haynes 75 Speedster identifies the Speedster as America's blue ribbon sport car that is capable of attaining seventy-five miles an hour. The blue ribbon is fastened to the Haynes 75 Speedster when it is shipped from the factory, and signifies that the car has been thoroughly inspected and tested. It certifies, too, that the Haynes 75 Speedster is similar in every respect to the Speedster which was tested by Howard Wilcox in his famous run.

"On Thursday, March 9, 1922, I drove a strictly stock Haynes 75 Speedster over the Indianapolis Motor Speedway course at Indianapolis, Indiana. I attained speeds ranging from seventy-four (74) to eighty (80) miles an hour. The speeds were clocked officially by the Indianapolis Motor Speedway electric timing machine. In my opinion, the Haynes-built 75 six cylinder engine is a remarkable stock motor. It has the necessary speed, stamina and get-away to meet the requirements of the most exacting motorist, and at topmost speed it showed a decided lack of motor vibration. It is the sturdiest and fastest stock sport car I have ever driven to date." (*Signed*) "HOWDY" WILCOX.

Howard Wilcox, internationally known racing driver and winner of the Indianapolis Motor Speedway International 500-mile classic. Mr. Wilcox has driven many leading racing cars of foreign manufacture, and several of the finest American stock cars, in tests and races.

POWER, BALANCE, SPEED—*a Mile in 48 Seconds*

When Howard Wilcox established the performance record for the strictly stock Haynes 75 Speedster, he demonstrated the worth of the high quality of steels and other materials used in the manufacture of this fast sport car.

The mechanical reasons which enabled Mr. Wilcox to attain an average speed of seventy-five miles an hour, are the same which give any owner of a Haynes 75 Speedster dominance on the road.

With a car of such phenomenal power and stamina, only a very small portion of its capacity is employed in ordinary driving. This means that the Haynes 75 blue ribbon Speedster will give more satisfactory service for a greater number of years than the car whose maximum power is required for every day's use.

The liberal use of tested steels and drop forgings makes this car safe at the high speeds the Haynes 75 blue ribbon Speedster will naturally be driven by its enthusiastic owner. The blue ribbon award for speed, stamina, power, reliability and endurance, to the Haynes 75 Speedster, is a fitting tribute to the famous Haynes engineers who alone have the distinction and honor of designing and perfecting automobiles for more than a quarter of a century.

$2395

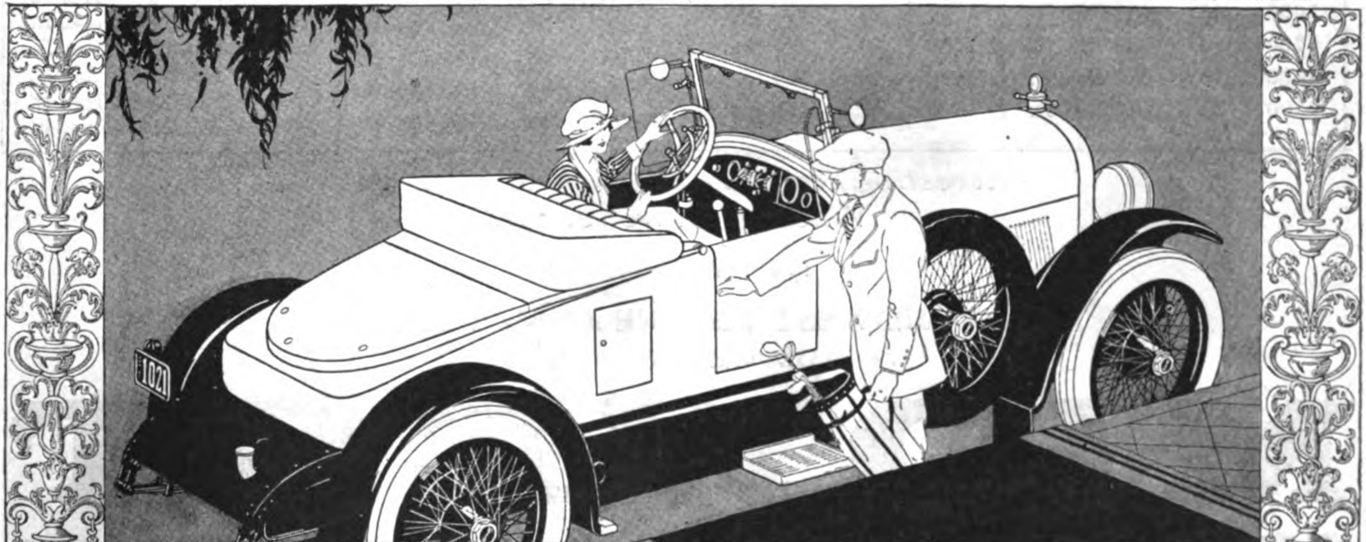
F. O. B. FACTORY

The Haynes 75 blue ribbon Speedster is a strikingly beautiful car in appearance; its owners are deservedly proud of it.

In its class it may unhesitatingly be said to be the greatest value possible. Its excellence is typical of the whole Haynes series. These cars, and the good territories still open for Haynes representation, offer rare opportunities for the dealer who wants success in 1922. Write, telephone or wire for appointment in confidence. In writing or wiring address Dept. 749.

THE HAYNES AUTOMOBILE COMPANY, *Kokomo, Indiana* • EXPORT OFFICE: 1715 Broadway, New York City, U. S. A.

© 1922, by T. H. A. Co.



The new, improved Haynes 75 blue ribbon two-passenger Speedster is equipped with individual steps and individual fenders, and two wire wheels. Wind deflectors, rear vision mirrors, windshield cleaners, exterior side cowl lights, and searchlight type head lamps are also furnished at no additional cost.

MIDWEST'S PROUD RECORD

is based on

PERFORMANCE

Forget Bore and Stroke—

It's Performance that Counts

The performance records of Midwest Engines indicated below are not the result of "flash" test readings. Every Midwest Engine is GUARANTEED to equal or EXCEED these records of performance hour after hour. Compare these engines with other engines commercially available.

MODEL 400
(4 Cyl. 4½x6 in.)

R. P.M.	H.P.	Torque
400	17.5	233 lbs. ft.
600	28.5	249 lbs. ft.
800	37.5	246 lbs. ft.
1000	46	243 lbs. ft.
1200	53	234 lbs. ft.
1400	59	222 lbs. ft.
1500	61	213 lbs. ft.

MODEL 402
(4 Cyl. 4⅛x5¼ in.)

R. P.M.	H.P.	Torque
400	13	171 lbs. ft.
600	20.5	179 lbs. ft.
800	27.5	181 lbs. ft.
1000	34	179 lbs. ft.
1200	40	175 lbs. ft.
1400	45	169 lbs. ft.
1600	47.5	156 lbs. ft.

MODEL 408
(4 Cyl. 3⅝x5 in.)

R. P.M.	H.P.	Torque
500	11	116 lbs. ft.
600	13.5	118 lbs. ft.
800	19	125 lbs. ft.
1000	25	130 lbs. ft.
1200	29	127.5 lbs. ft.
1400	33	124 lbs. ft.
1600	36	118 lbs. ft.
1800	39	114 lbs. ft.

MODEL 409
(4 Cyl. 3¼x4½ in.)

R. P.M.	H.P.	Torque
600	10	85 lbs. ft.
800	13.25	88 lbs. ft.
1000	16.80	90 lbs. ft.
1200	20.20	91 lbs. ft.
1400	23.80	90.5 lbs. ft.
1600	27.00	89 lbs. ft.
1800	29.60	87 lbs. ft.
2000	31.70	84 lbs. ft.
2200	33.30	81 lbs. ft.
2400	33.80	74 lbs. ft.

Interesting literature available on all models
Where shall we send it?

Please address Dept. 12

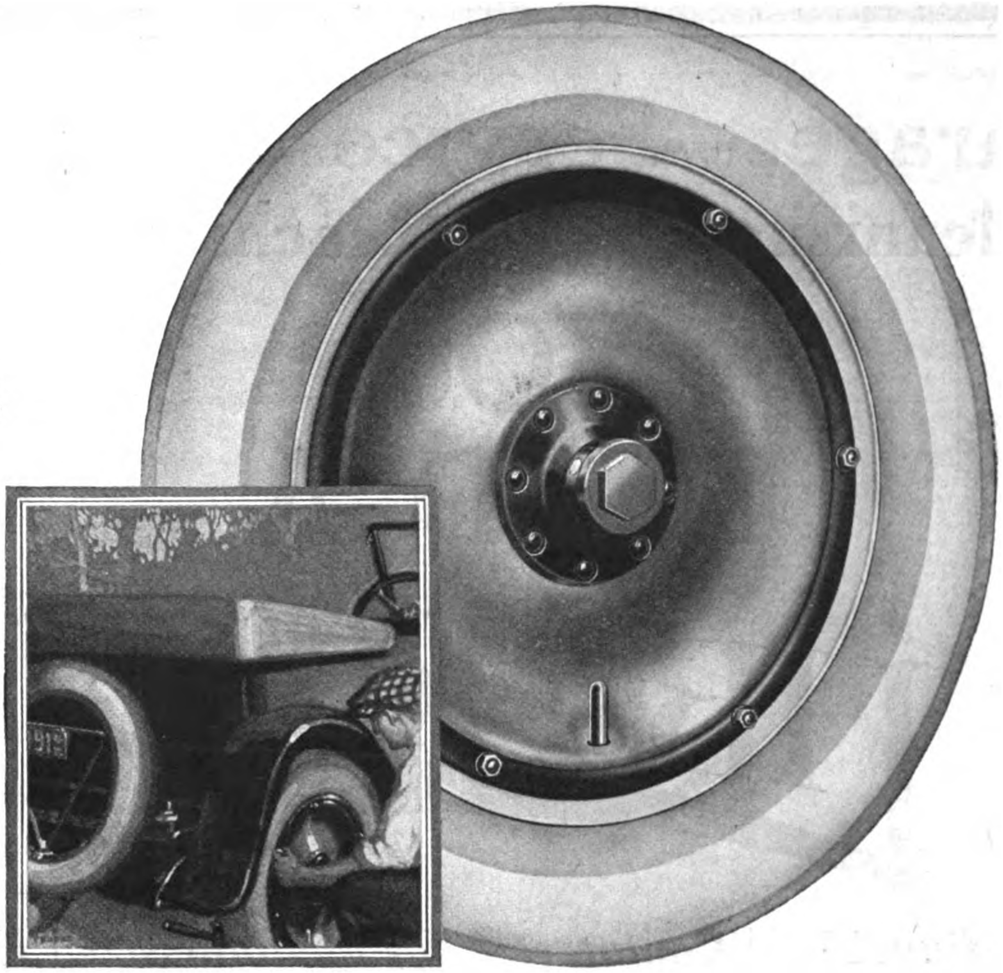
MIDWEST ENGINE COMPANY
INDIANAPOLIS, U. S. A.

MIDWEST

COMMERCIAL CAR POWER PLANTS

Motor Wheel
PRODUCTS

Gier
Tuarc
STEEL WHEELS



Beautiful, smoothly curving one-piece disc . . . . extreme strength with resilience . . . . lighter in peripheral weight than any other wheel which affords the convenience of demountable rims . . . . direct outside valve stems . . . . hubs that fit without special parts . . . . now standard equipment on ten of America's best-known cars.

Organizations and individuals capable of handling the wholesale distribution of Gier Tuarc Steel Wheels are invited to make application for exclusive territory assignment.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

Motor Vehicle Wheels Complete — Metal Stampings — Steel Products

509 Fisk Bldg., B'dw'y at 57, New York
584 Commonwealth Ave., Boston
10 South 18th St., Philadelphia

120 Madison Ave., Detroit
601 Capitol Theatre Bldg.

Bigelow Blvd. & Craig, Pittsburgh
913 Phelan Bldg., San Francisco
1341 So. Hope St., Los Angeles

Gier
Tuarc
STEEL WHEELS
—a Motor Wheel Product

Garages---Service Stations Vulcanizing Shops---Machine Shops

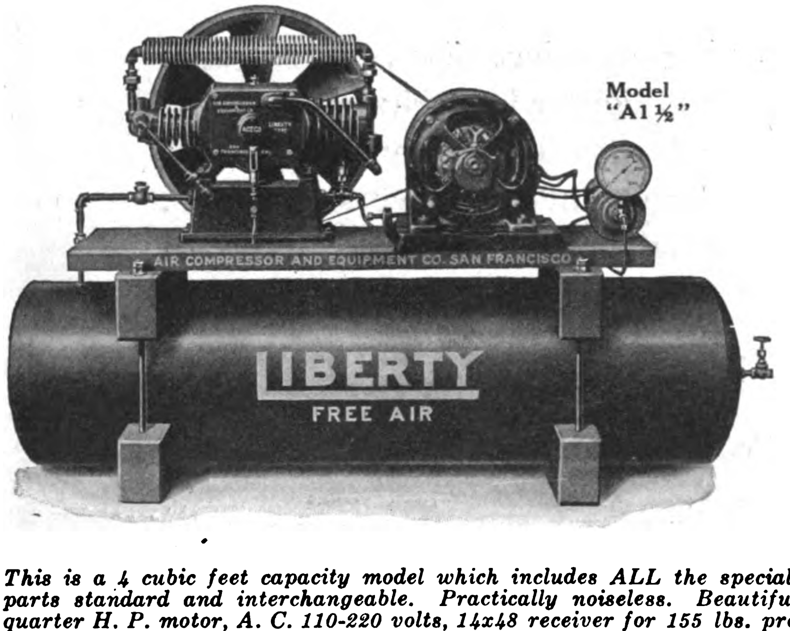
JOBBERS:
WRITE US
FOR
ATTRACTIVE
PROPOSITION

YOU NEED A

LIBERTY

AIR COMPRESSORS

"A Medium Sized Compressor for Medium Sized Needs"



Model
"A1½"

The price and liberal terms on which Liberty Air Compressors are sold leaves absolutely no reason why every Garage, Service Station, Vulcanizing, and Machine Shop, should not be efficiently equipped with this mechanical wonder. It is not alone the specifications of the Liberty on which we base our claim for superiority, but the year-in-year-out hard every day service which they are giving users on the Western Coast. There is no doubt that the Liberty stands pre eminent among compressors as an economical, trouble-free, oil-free, dependable compressor.

This is a 4 cubic feet capacity model which includes ALL the special features in all other Liberty models! All parts standard and interchangeable. Practically noiseless. Beautifully finished in green, red, and gold. Three-quarter H. P. motor, A. C. 110-220 volts, 14x48 receiver for 155 lbs. pressure, two stage compressor, AUTOMATIC switch, and all fittings complete. This model as illustrated, $280. Deferred monthly payments if desired. Five Percent for cash. This model is specially constructed for average size needs. Write for catalog of other models, and name of your nearest jobber.

AIR COMPRESSOR AND EQUIPMENT COMPANY

46-50 NATOMA STREET, SAN FRANCISCO, CALIF.
504 SO. SAN PEDRO STREET, LOS ANGELES, CALIF.
1433 CARROLL AVENUE, CHICAGO, ILL.

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 6 JULY 1, 1922 $3.00 PER YEAR

EQUIPMENT MEN IN COLORADO SPRINGS

High Spots in Five-Day Convention of the A. E. A. Told by a Motor West Man Who Was Present.

The 1922 spring meeting of the Automotive Equipment Association was held at Colorado Springs, Colo., June 19-23, inclusive.

It's called the spring meeting because it is held in the summer time.

Last year the delegates roasted at Mackinac. This year it was hot, too. Coast delegates and guests longed for the blankets, at night, for weather they are used to. The Easterners took it nonchalantly—and said it could be considerably worse.

About 650 delegates and guests were there, from all points of the compass. Most of them stopped at the Broadmoor, a huge caravansary, 5 miles south of Colorado Springs, in the foothills of the Rockies. Here they found everything to make life pleasant and cheerful—good eats, fine rooms, fishing at the front door, plunge, excellent golf links, tennis courts, and the mountains, with their varied attractions, just a few miles away. Looming above all was Pike's Peak, with a few patches of snow still marking its rugged sides.

This is not a report of things in the order in which they occurred. It is in line with the fact that what happened, rather than when it happened, is of general interest.

—

Commissioner Webster's Report.

The first day's sessions were devoted largely to reports. Commissioner Webster's, at the general session in the morning, showed the association to be in excellent financial condition; that its work is widening and being done with celerity; that membership is growing constantly, with comparatively few withdrawals. The commissioner directed the meetings with his usual snap and energy. His recommendation that the next show be a "closed" one was received with varying emotions, the sentiment for and against seemingly being about 50-50.

Mr. Webster said that, as many of its meetings and conventions have been in the West, the impression has developed that the A. E. A. is a Western organization. He suggested therefore that some of the association's future annual meetings and shows be held in New York City. This suggestion was received favorably, though no vote was taken till later in the week.

—

President Dine's Address.

President Howard M. Dine's annual address laid particular stress on the standardization program as being of the utmost importance to the industry. He also indorsed the foreign export plans of the Government. A careful canvass of the delegates present, he said, indicated that the industry is now on the verge of the greatest boom in its history. The automotive equipment business, he averred, now represents an investment of more than $100,000,000.

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Director Sherman's Work.

The second day's general session was devoted largely to scientific merchandising, as part of the association's efficiency program. Ray W. Sherman was the principal speaker, and to better illustrate his points there was shown a specially prepared motion picture showing the best methods of running a garage. This picture will form part of Mr. Sherman's equipment during his coming year's campaign throughout the country.

During the coming twelvemonth, it was definitely decided, the association's merchandising activities will be along the lines planned by Ray W. Sherman, its merchandising director. His work during the past year has been very effective.

The kernel of Mr. Sherman's work is to teach dealers and others how to "ask 'em to buy." The knowledge already has done much to increase commerce, expressible in hundreds of thousands of dollars of even more benefit to the purchasers than to the sellers.

ASSOCIATION IS O. K. FINANCIALLY

Sherman's March to More Business to Continue—Export Need is Emphasized by a Government Man.

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Gordon Lee on Exports.

The principal feature of Friday's meeting, the second general session, and indeed of the convention itself, was the paper on Entering Foreign Markets for Automotive Equipment, by Gordon Lee, chief of the Automotive Division of the Bureau of Foreign and Domestic Commerce. Mr. Lee showed why American automotive manufacturers should export, and gave statistics to illustrate that there is a remunerative market for them abroad. These sales, he pointed out, may represent the difference between profit and loss on a year's business and smooth out seasonal fluctuations.

Pointing out many reasons advanced by automotive manufacturers for not exporting, Mr. Lee demonstrated how his division will help them overcome difficulties. He told how the problem of selling abroad generally is tackled through dealers, and why the results are disappointing. The Automotive Division's plan, he showed, includes an analysis of automotive export markets in general; ascertaining the market for particular lines of accessories; selecting the proper dealers; studying the peculiarities of markets, etc.

A study of shipping routes and rates is essential, said Mr. Lee, along with a knowledge of the intricacies of marking, shipping, tariff and custom house regulations. Likewise the exporter must be "hep" to the legal status of his contracts with foreign representatives, foreign processes of litigation, etc.

The American Foreign Trade Service abroad assists the exporter in the selection of proper representatives; safeguards his interests against competitors and unfair trade practices, supplying information automatically and upon request, by mail and cable—free! The only requirements are that the exporter subscribe to the Commerce Reports, and be listed in the Exporters' Index.

At the conclusion of Mr. Lee's address he was given a rising vote of thanks for the excellent manner in which he had handled his subject and replied to the many questions.

Annual Show Always in Chicago.

A motion that the association's annual show be held in Chicago, every year, carried unanimously.

Importance of Standardization.

The standardization committee, headed by Fred R. Hall of Northwestern Chemical Co., Marietta, O., has been working three years on a handbook, now complete, presenting standardization needs as to certain motor car equipment that has not been standardized already through the Society of Automotive Engineers. It is expected to result in a commercial standard for brake linings, piston rings, chemicals, gaskets and many other things.

Freight and Traffic Bureau.

The automotive accessories business is said to have suffered much from unfair freight transportation classification. For instance, buggy springs are third class but automobile springs, in the same class, pay a much higher rate. Hence the formation of a freight and traffic bureau, in charge of R. W. Poe, Atlanta, Ga., former head of the Southern classification committee, to co-operate with the Motor and Accessory Manufacturers' Association and National Automobile Chamber of Commerce, for better treatment.

Credit Department's Fine Work.

The association's credit department has helped members collect more than $750,000 on accounts which otherwise would have been uncollectable except through legal procedure, and often not then. The association's power is made clear and easy to understand, to the careless debtor or to the dishonest one who formerly would say: "All right, collect if you can."

A Hack at "Dave".

At the manufacturers' divisional meeting on Wednesday afternoon all hands took a hack at "Dave", the Detroit jobber whose handsome catalogue shows cut rate prices on all standard equipment. Manufacturers, on roll call, denied having dealings with him, and a committee of one was appointed to confer with the jobbers to find out just how "Dave" got his stocks of goods and the cuts with which to illustrate his catalog. The committee reported in a few minutes that the jobbers' meeting had adjourned.

Unsigned Price Idea Tabled.

An unsigned communication, said to be from a Pacific Coast jobber, was read, urging manufacturers "to refrain from quoting retail prices" in their advertising. "Where practicable, however, the range or prices should be quoted for their line. There is no danger of jobber or retailer attempting to make an undue profit on such wares. Competition among the trade will protect the consumer and safeguard him from being exploited." Several exceptions were taken to the statements, and the communication was laid on the table by unanimous vote.

The Golf Tournament.

The A. E. A. golf tournament over the Broadmoor links brought out a big field of contestants. Bob Stranahan, president of Champion Spark Plug Co., Toledo, O., won the low gross prize with an 82, starting from scratch. G. W. Brogan, advertising manager of Black & Decker Mfg. Co., won second honors with a score of 89. Howell, of St. Louis, won the low net with a score of 88-15-74, and Rolland Markle, manager of the Gill Piston Ring Co. of Seattle, took second honors with 87-12-75.

Some New Members.

Among new members announced at the convention were: Ajax Auto Parts Co., Racine, Wis.; Armstrong Cord Co., Pittsburgh; Barber Asphalt Co., Philadelphia; Borg & Beck, Chicago; Buckeye Brass & Mfg. Co., Cleveland; Duluth Show Case Co., Duluth, Minn.; Franklin Machine & Tool Co., Springfield, Mass.; Fibro Finishing Co., Boston; W. D. Foreman, Chicago; Hayes Wheel Co., Jackson, Mich.; The Ironsides Co., Columbus, O.; Lake Erie Metal Products Co., Cleveland; Wm. E. Pratt Mfg. Co., Chicago; Rollaway Motor Co., Toledo, O.; Rossendale-Reddaway Belting & Hose Co., New York City; South Bend Lathe Works, South Bend, Ind.; Stone Mfg. Co., Chicago; Thompson-Neaylon Mfg. Co., Chicago; U. S. Asbestos Co., Lancaster, Pa.; White Brass Castings Co., Chicago.

Pacific Coast Delegates.

The Pacific Coast was fairly well represented. Among those seen wandering around the spacious corridors of the Broadmoor were: C. F. Wright, of Ballou & Wright, Portland; P. H. Lyon, of Chanslor & Lyon, San Francisco; A. M. Cronin, of P. J. Cronin Mfg. Co., Portland; N. L. Quisenberry, California Auto Supply Co., Stockton; C. Robert Churchill, Electric Appliance Co., San Francisco; J. H. Ernst, E. A. Featherstone Co., Los Angeles; S. W. Gilfillan, Gilfillan Bros. Inc., Los Angeles; A. D. McMullan, Motor Mercantile Co., Salt Lake City; James S. Remick, James E. Remick Co., Sacramento; William P. Drake, Coast representative Gemco Mfg. Co., Los Angeles; M. A. Johnson, manager of Black & Decker Mfg. Co.'s San Francisco branch; E. D. Newfield, representing General Asbestos & Rubber Co., San Francisco; E. O. Johnstone, representing American Chain Co., San Francisco; C. A. Gilbert, representing American Hammered Piston Ring Co., San Francisco; Norman Cowan, representing several Eastern factories, San Francisco.

How They Came and Went.

As usual, the railway transportation arrangements were perfect. Special trains, routed from various points in the East, were run on a schedule which insured their arrival at Colorado Springs on Sunday afternoon, June 18. Every detail was carried through without a hitch, not even the slightest accident or delay interfering with the plans of the excursionists. It was hoped a special car from the Pacific Coast could be arranged for; but a sufficient number could not be enlisted by Committeeman Robert Weinstock, and Coast members traveled to the convention by twos and threes.

Returning home, most of the members and guests took advantage of the low railroad rates to include in their itineraries Salt Lake City, Yellowstone Park, Glacier Park, Grand Canyon, and even Pacific Coast points. Very few returned by the route they came.

One group of jobbers drove their cars to the convention from Indianapolis. Besides a pleasant trip, they had the benefit of their own transportation when they reached Colorado Springs. Some of the delegates admitted that they had forgotten how to dig into their jeans for carfares.

Automotive Journals Represented.

Every prominent automotive publication had one or more representatives present. Among them were E. E. Haight and Clyde Jennings, of Motor Age; Neal G. Adair, of Motor World; Harry Lasher, of Motor; Messrs.

Cornings, Hornberger, O'Donnell, et al, of Chilton Publishing Co.; Sid Stern, of Automotive Merchandising; G. M. Schell and F. Ed. Spooner, of Motor West, and numerous others. As these were all guests of the convention, there were no attempts made to sandbag the delegates in an advertising way. "Business and pleasure" was the watchword of the convention, but it was generally understood that business did not include the great American sport of "getting the name on the dotted line."

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Invocation Was Unique.

The invocation at the opening of the first general session by Rev. John T. McCarthy, assistant pastor of St. Mary's Church, Colorado Springs, was a classic. The reverend gentleman introduced the automobile into his prayer in a manner that was unique, and his effort was fully appreciated by all his hearers.

It seems well worth quoting:

"O God, Omnipotent Creator of all things, visible and invisible, wonderful Allwise Architect of this universal frame, Controller, Master, Guide and Director of nature's throbbing multitudinous forces, which in thy infinite wisdom thou hast admirably adapted to one beneficent purpose—to minister to man's mental and bodily needs. O Omnipotent Ruler, who from thy high citadel of unalterable power, lookest down and dost complacently behold thy supreme universal law, regulating the dynamics of all being, reaching from end to end mightily and ordaining all things sweetly in the universe thou hast fashioned for thy glory, we thank thee for the progress of scientific investigation, which in this century and the last hast wrested from nature the hidden secret of her untamed powers and, harnessing them to the chariot wheels of progress, compelled them to subserve man's use and pleasure.

"It is a far cry; O Lord, from the first wheeled contrivance evolved from the trailing branches attached to the sides of a horse, to the first self-propelled vehicle invented by Cugnot. It is a far cry even from Cugnot's motor to the highly perfected machine of today, whirling through space, like a star in its orbit, with an almost incredible velocity.

"The genius and imagination of man, tiny scattered rays of thy eternal light, followng in the track of the physical sciences, was stimulated to marvelous achievement and daringly soared to grasp the bold conception of the twentieth century motor car, which has revolutionized methods of travel, brought pleasure to the doors of millions, a splendid aid to the development of commerce, the second giant industry in the American continent, one of the great arteries of transportation, bidding fair to outrival our gigantic network of railroads.

"For these wonderful discoveries and fertile inventions of the past, we thank thee, O Lord. And now, Father of light, we invoke thy benedictions on the members of this convention, that thou wouldst take out of their hearts the spirit of intellectual pride, and irradiate their minds with the beams of thy heavenly light, that thou wouldst inspire and guide their deliberations by the deep counsels of thy infinite wisdom, that thou wouldst illuminate their minds with a keener insight and a fuller understanding of the laws that rule thy universe and govern its forces, so that the discussions of this convention may lead to clearer truth, to larger light, to more constructive effort, for the further upbuilding of the colossal motor industry, and the further perfecting of the wondrous machine that has annihilated distance, multiplied the conveniences of life, enlarged the circle of its pleasures, and made this planet a happier and better place to live in."

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Convention Notes.

In the entertainment line, the Pike's Peak trip led. That altitudinous jaunt meant, to some, headaches, dizziness, tottery legs; but afterward even the "cripples" voted the outing a huge success.

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To the outsider it did not appear that manufacturer and jobber delegates pulled together very well in the general sessions. Commissioner Webster more than once called upon them to forget self in the effort to advance the general good.

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While most of the Eastern contingent arrived in the A. E. A. special train, the Northern, Southern and Coast delegates went in special cars from centrally located cities in their several sections. Each contingent became a huge family affair on the way to the convention.

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Concentrate 650 men, of various types of training and environment, at a pleasure resort for a period of work-and-play, and in nine cases out of ten there will be brought to the fore a certain coterie whose ideas of what constitutes pleasure conflicts with those of the large majority of their fellow-delegates. This convention differed from gatherings of similar character the writer has attended. It was wholesome. Plenty of fun and gayety, but of the right sort, and timely.

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Commissioner Webster, who is on the citizens' committee of 500, in Chicago, to enforce the Landis award so bitterly fought by labor unions, spoke in Colorado Springs in January, when the Open Shop Association was formed there.

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Gordon Lee, chief of the Automotive Division of the Bureau of Foreign and Domestic Commerce, in the Department of Commerce, who was scheduled for the big talk at Friday's general meeting, was called upon by Commissioner Webster, in the opening session, to say a few words. Mr. Lee obliged with a snappy address that brought bursts of applause. When he said: "Germany will have to pay the very last mark of her indebtedness—and in gold, too!" the applause was marked. It lasted several minutes.

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One pleasant feature of the first general session was the presentation to William Von Elm, of New York, of an expensive Swiss striking watch, in appreciation of his work in getting out the splendid universal catalog.

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Besides the Wednesday night entertainment, the golf tournament and the Pike's Peak trip, the dancers had the run of the ballroom every night, the red-coated Broadmoor band being in constant demand.

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The fishing possibilities offered by the well stocked lake in front of the hotel attracted dozens of the delegates, and there were hundreds of fine trout, cooked by the chefs for the persistent ones. The order was: "Guests are permitted to catch trout, but the fish must not be removed from the premises. Hand them to the cook, and he will serve them to you in any style you prefer."

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There was a pleasant little fiction in some of the preliminary convention publicity about charges for transportation between Colorado Springs and Broadmoor. It said to the effect that the charge was 75 cents, but the arriving stranger could not distinguish a Broadmoor bus from the average automobile and paid from $2.50 to $3.50 for a 5 mile haul. If one knew the ropes, of course, he could get the 75 cent rate.

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Mr. and Mrs. Phil H. Lyon of San Francisco, still on their honeymoon trip, came west from Chicago to Colorado Springs on the A. E. A. Special. They were the recipients of much attention. Joseph Weidenhoff, of Weidenhoff Products, Chicago, announced his intention of coming to the Coast next fall. His company contemplates an intensive campaign in this territory.

The Little Theatre, where the general sessions were held, was rightly named. It was much too little, and the ventilation was not of the best.

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A large convention photograph, arranged for in Colorado Springs, has not arrived.

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Publisher Schell of Motor West left for home the closing day, before adjournment, and Advertising Manager Spooner "covered" the remainder. Perhaps part of his story got mislaid and all that was received concerning the Gould speech was that it made a wonderful hit—long cheering, standing up, waving, etc. So we have the waving, if nothing more, at this time.

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On several occasions Commissioner Webster referred to the Del Monte, Calif., convention of 1920, as something for the entertainment committee to emulate. Not a few of the delegates compared Colorado Springs and Del Monte, invariably to the detriment of the former, while the Mackinac roundup in 1921 was a bad third.

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When Commissioner Webster urged all hands to get to the evening entertainment at "approximately 8 o'clock sharp" there was howl of glee. Also so many matters were "laid on the table" that he suggested a few additional tables be provided.

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President H. M. Dine, of the Dine-DeWees Co., Canton, O., had a narrow escape from a serious accident. He was standing near the edge of the golf club porch and, stepping back suddenly, fell four or five feet, spraining an ankle. He sported crutches throughout the meeting, but managed to attend to his presidential duties.

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Souvenirs were plentiful. Among them, the solid rubber balls distributed by Gates Rubber Co., Denver, were most popular. Trexler Co., Philadelphia, gave away air valves, and Presto Metal Specialties Mfg. Co., Chicago, handed out key rings. There were others.

MANY COAST MOTORISTS VISITED ROCKY MOUNTAIN PARK, COLORADO, LAST YEAR. Reversing the order of pioneering, Californians are traveling eastward for recreation, judging from the many automobile license tags of the state seen in Rocky Mountain National Park, in Colorado, during the 1921 travel season. This meant long-distance driving, possibly 5000 miles in all, from the Coast to the most central of the national playgrounds in the United States. California was ninth among the states in representation, with 216 cars containing 822 persons, doubling the previous year's registration, when 99 cars, containing 370 people, were checked. Virtually all of the 273,737 persons who visited Rocky Mountain National Park during the 1921 season—some by automobile only, others by rail and automobile, from Denver, the "Gateway City," also motored through the Denver mountain park system. This municipal playground, visited by 600,000 motorists during the summer, contains 4000 acres of woodland, crag and balsam-scented vale and begins 12 miles from the city. Rocky Mountain National Park in 1921 had 100,573 more persons than the total registration for Yellowstone and Yosemite Parks, and increased its own 1920 record by 32,771.

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After the convention Commissioner Webster and his wife, with Mr. and Mrs. R. L. Englehart, of Davenport, Iowa, started on a long tour of the Orient. They will be in San Francisco this week.

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Charles G. Gates, of Gates Rubber Co., Denver, was a busy man. During the A. E. A. convention he found time, however, to address the Colorado Springs Rotary Club at its weekly luncheon.

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L. L. Mosser, treasurer of Globe Superior Co., Abingdon, Ill., stopped off at the convention en route to the Coast. This company makes "work and play" clothing and is preparing for an active campaign west of the Rockies.

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Edward C. Wright, assistant to the president of Edward A. Cassidy Co., Inc., New York City, is en route to the Coast, where he will visit the company's representatives in every prominent city. He so timed his trip as to take in the A. E. A. convention.

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E. P. Chalfant, president of Gill Mfg. Co., Chicago, for the past seven years, announced his retirement, June 15 last, from that position, being succeeded by E. J. Smith, former general manager and treasurer with the title of president and general manager. Mr. Chalfant, who still retains the presidency of the Gill Piston Ring Co. of New York City, will be chairman of the board of directors of the parent company. He, with Mrs. Chalfant and their daughter, will tour the national parks and incidentally inspect some of his Western mine holdings.

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It was the busiest period of the season for the Broadmoor—a fine hotel, that; American plan, the tariff being $12 a day. "Tariff" is derived from "Tarifa," a name of an island off the coast of Africa, and of a robber who made it his headquarters.

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Despite its hugeness, the Broadmoor could not accommodate all the delegates and their guests. Some had to put up at the Antlers, the Acacia and other official hotels in Colorado Springs, and each of these had to pay $2.50 a trip for automobile transportation, 5 miles, out to the Broadmoor, or take a one-man trolley line, at 14 cents per trip. That saved the situation, with a car every 20 minutes.

ALL ABOARD FOR TACOMA, JULY 4

Among Notable Entries for 250 Mile Race, Six to Use "World's Fastest" Motor, Made in Los Angeles.

All aboard for Tacoma! A 250 mile race, its eleventh annual "classic," will be contested by some of the world's crack automobile pilots on its 1¼ mile board track, July 4, for a purse of $25,000, divided thus: Winner, $10,000; second man, $5000; third, $3000; fourth, $1750; fifth, $1500; sixth, $1250; seventh, $1000; eighth, $750; ninth, $500; tenth, $250.

Fred Wagner will start 'em. Barney Oldfield will pace 'em. About 30,000 persons will watch 'em. Seat reservations received from all sections of Washington and the northern part of Oregon were breaking record even in May.

The entries include Cliff Durant, Durant Special; Jimmie Murphy, Murphy Special; Harry Hartz, Duesenberg; Ralph De Palma, Duesenberg; Tommy Milton, Leach Special; Ralph Mulford, Frontenac; Howard ("Howdy") Wilcox, Peugeot; Roscoe Sarles, Duesenberg; Peter (Newlywed) De Paolo, Disteel-Duesenberg; Bennett Hill, Leach Special; Jerry Wanderlich, Duesenberg; Leon Duray, Frontenac; Art Klein, Frontenac; Eddie Hearne, Leach Special; Frank Elliott, Leach Special.

Hearne, it appears, has quit vaudeville racing. Perhaps he found it too dangerous compared with the easy life on a regular speedway.

Durant returns to the sport "for this time only." Mebbe so.

Perhaps Tacoma, July 4, will fix as a fact the claim that the fastest motor in the world is made on the Pacific Coast. Including the Leach Specials, and the cars of Murphy and Durant, six machines will be propelled by the motors Harry Miller makes in Los Angeles.

Annual Eastern Oregon Race Meet.

Oregon's second A. A. A.-sanctioned race meet of the year will occur at Baker, in Eastern Oregon, July 3-4. This is an annual event under the auspices of the Baker County Automobile Dealers' Association, and is the recognized automobile race classic of that section. Over $2500 in cash prizes have been posted, and the best cars and most experienced dirt track drivers in the West are expected to compete.

July 3 will see the preliminaries, with a motorcycle race, an automobile race for small cars and one for large cars; July 4, a free-for-all, 25 miles on the half-mile track. For the winners alone, cash prizes aggregate $1000. E. F. Collins, secretary of the association, is managing. Frank Watkins, Portland, is representative of the A. A. A. contest board.

500 Mile Cotati Race in November.

It is reported that in addition to its 150 mile race, August 6, Cotati is to have a 500 mile event November 11, Armistice Day.

The distance indicates not only a Northern California determination to play the publicity game strongly—for one of the most valuable results of such a race in so small a place is publicity the world over for the adjacent region—but it indicates the cracks meant it when, at Indianapolis, May 30, they signed a statement to Jack Prince, track builder, that "we think the one you built at Cotati, near Santa Rosa, is the best one, both for safety and speed."

On May 7, Murphy and his California-built motor won a 150 mile race at Cotati, breaking world record, despite a cold, windy day, averaging 115.34 miles an hour. The same day, Bordino won the 50 mile event, averaging 114.4 miles per hour.

CAMP FOOD TIPS.

Flour, beans, rice and fats produce muscle and energy.

Dried fruits tone the system and offer variety in plain fare.

A preponderance of fats is injurious in warm weather.

Corn meal makes an excellent fall and winter food, but should be eaten in summer sparingly.

Butter is a habit and a nuisance to carry. Its absence will be unnoticed in a few days.

Carry one luxury. For some this is evaporated milk. Others like jam or preserves. Let the individual decide what it shall be.—Los Angeles Times.

It was noted then that the men financing the track were "carrying on" and hopeful.

There were improvements at the track—box seats changed and bettered; promenade eliminated to prevent obscuring the view; sloping runways previously used as entrances to the stand discarded, so that the safety subway only was used, directly to the seats via a wide stairway leading to each aisle. By this change, too, there were eight entrances and exist instead of two entrances and three exits.

San Luis Obispo, Calif., will have four heats and a final for 183 cubic-inch machines, July 4, on its dirt track, for a $1500 purse. It has A. A. A. sanction.

San Carlos Track Half Burned.

Soon after noon, June 19, fire was discovered under the track at San Carlos, Calif., about 20 miles south of San Francisco. About half of it was burned. The track is to be rebuilt and it is announced a 250 mile race will be run October 15 for a $25,000 purse and, on New Year's Day, a 500 mile race for both 122 and 183 inch cars for a $50,000 purse "and such additional sum as can be raised for a citizens' lap prize fund." The announcement appears to be by "Bill" Pickens. A previous announcement, of a 500 mile, $50,000 race for November 11, Armistice Day, also presumably was issued by him. Even $25,000 is a big purse for even a profitable track on the Coast. The recent San Carlos race is said to have caused a $15,000 loss. Practically all fire loss is claimed to be covered by insurace. Whether the fire was caused by a grass fire, or the grass was ignited by the track fire, has not been solved.

Fresno Man Wins at Red Bluff.

George Miller, of Fresno, in a specially built car, won first prize, $300 in a 50 mile race at Red Bluff, Calif., June 19, in 29:44.50. His two competitors were Joe Savateer of Woodland and "Red" Murray of Sacramento. Savateer was second.

In a 10 mile race for "inexpensive cars of popular make," W. Toulou, Sacramento was the conquering hero in 12:51.40.

No Colorado Springs Track.

During the Automotive Equipment Association convention in Colorado Springs, Colo., Jack Prince proposed to the Pike's Peak Exhibition Club that it have him build it a track on the Rodeo grounds north of town; and the proposition was declined definitely. It was Jack's usual one, that $250,000 be raised by selling life memberships, entitling holders to seats, at $100.

Pit Men Had Humor.

Joe Thomas had things so much his own way in the recent 150 mile race at San Carlos that several times, instead of letting him know his position, the placard hoisted by his pitmen had something comical on it, such as "Oh, papa!" Toward the end of the placard read "The bacon."

In Stephenson's Bailiwick.

As A. A. A. contest board representative in Southern California, George A. Stephenson of Los Angeles will attend the sanctioned dirt track race meet at San Luis Obispo, July 4. Mr. Stephenson recently became distributor of Lincoln snubbers.

COAST GOODYEAR'S THIRD YEAR BEGUN

Men Who Made 1,124,697th Tire, June 14, Are Anniversary Honor Guests at a Nourishing Get-Together.

June 14 was jubilation day at the Los Angeles Goodyear factory, as June 8 had been in Akron, when powerful sirens blew 45 one-minute blasts to announce completion of the Ohio plant's 45,000,000th automobile tire.

The Los Angeles to-do was on the day the plant started its third year. On that day its 1,124,697th automobile tire was built.

Tires don't eat, but the men who made this particular one do; so Factory Superintendent H. E. Blythe made them honor guests at a luncheon. Their names,—L. C. Ranney, tire builder; William Fillion, tire finisher, and C. L. Young. of Goodyear Textile Mills—were honored with them as representing the fabric unit. Others present were from the factory council, sales force, administration department; and H. A. Price, manager of the Los Angeles branch, represented it.

Mr. Blythe outlined the California company's production history. The first tires were built June 14, 1920, and production has been continuous except for the usual semi-annual inventory interruptions. To June 14, 1922, the total number of inner tubes manufactured was 1,263,421.

"Long staple cotton from Arizona and Imperial Valley," said Mr. Blythe, "and rubber from Sumatra, are manufactured by California workmen into tires that in every respect are as worthy of the Goodyear name as those produced at Akron and Toronto."

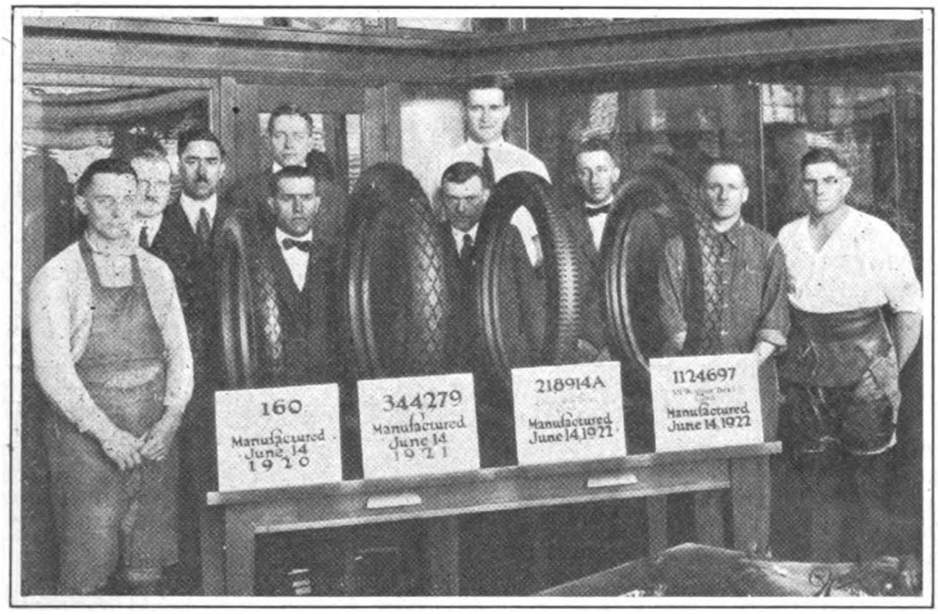
Coast Agents for Pilot Sought.

Expressing appreciation of Motor West's June 15 description of its Six-Fifty line of seven stylish models, Pilot Motor Car Co., Richmond, Ind., said its only present Pacific Coast connection so far is in Los Angeles, and that it is open for aggressive dealers in other Pacific region centers.

Judging by the photo of the 5 passenger touring car, priced at $2000, and the line's custombuilt equipment (hand buffed Spanish leather, barrel type headlights, etc.), the actual cars must "look like a million dollars."

Davis Factory Head on Coast.

George W. Davis, president of George W. Davis Motor Car Co., Richmond, Ind., is making an extended business trip throughout the Pacific Coast territory. He plans to spend considerable time in San Francisco, Oakland, Los Angeles, and the other large Western centers. Particular significance attaches to his present trip by reason of the recent announcement that the new smaller Davis Six will make its first appearance in Coast distributors' sales rooms about the time he arrives in California.


160
Manufactured June 14 1920
344279
Manufactured June 14 1921
218914A
Manufactured June 14,1922
1124697
Manufactured June 14 1922

POSTING POSTERITY AS TO A GOODYEAR-CALIFORNIA TIRE MADE JUNE 14, 1922.
June 14, 1922, marked the beginning of the third production year of Goodyear Tire & Rubber Co. of California, Los Angeles. On that day its 1,124,697th tire was built. In the picture, grouped with tires representative of each anniversary, are members of Goodyear's factory council and workmen who participated in building the 1,124,697th tire. Left to right they are: William Fillion, tire finisher; S. A. Steere, superintendent cotton mill; L. S. Hall, assistant superintendent cotton mill; A. F. Pond, manager technical service division; in front of him, F. A. Steele, division superintendent; H. E. Blythe, factory superintendent; in front of him. W. R. Urquhart, mechanical engineer; H. B. Barron, division superintendent; C. L. Young, cotton mill worker; L. C. Ranney, tire builder.

Useful A. A. A. Car Crosses Country.

Wayfarer III, specially built Locomobile owned by Mrs. Stella Leviston of San Francisco, and the official scout car of American Automobile Association, left the Bay City May 1, piloted by Dan J. Nee, who expected to reach New York in about 20 days. The trip was made in 16 days.

Motor West of June 1 told of the car's remarkable equipment, including three California inventions—McClure oiling system, Heath siren and Holden air shock absorbers.

In New York Mrs. Leviston, at the national conference on state parks, delivered a most interesting lecture, illustrated with some of the most beautiful slides ever made, of picturesque features of the national parks, especially Zion Park in Southern Utah—which the writer can affirm has what are claimed to be the most wonderful colorings, especially by moonlight, of any national park, and superior even to those of Grand Canyon.

Mrs. Leviston was expected to deliver the same lecture to an audience of some of the most prominent people in Washington, D. C., writes M. O. Eldridge, director of roads of American Automobile Association. He says Mrs. Leviston has done a tremendous amount of good work for highway improvement in the Far West, especially in connection with the national parks.

Dan J. Nee, Mrs. Leviston's pilot. Mr. Eldridge praises as one of the best informed men on roads in the country. He has supplied the A. A. A. headquarters, and its San Francisco office, with much information as the result of his pathfinding tours.

Deprived of Sleep, Truck Men Say.

Ivan Kelso, associate counsel of Automobile Club of Southern California, is receiving affidavits in confidence from Los Angeles truck drivers who, in a probe the club is conducting, say their employers force them to remain at the wheel so long they become sleepy. The probe is based on reports that sleepy drivers have proved dangerous.

The state railroad commission forbids intercity stage drivers being behind the wheel more than 10 hours a day. This does not apply to truck operators, and the commission has no authority in cities, apparently.

He's a Flivver Prospect Now.

Where once the "desert rat" used to ramble, notably in Arizona—quaint, grizzled, eccentric old fellow with a burro, often—now one sees the man in a flivver, with a steering wheel in his hands and visions of rich, undiscovered surface mines or indications of underground ones, in his mind.

THE PARK-TO-PARK HIGHWAY PROSPECT

An Analytical Sort of Report of What Happened at Association's June 15-17 Meeting in Sacramento.

About half a hundred members of National Park-to-Park Highway Association, representing 9 states, held the organization's third annual convention in Sacramento, June 15-16-17.

Properly appraised, that is the striking news fact about it—the fact that that many men, representing a great area of this world's surface, traveled far, principally all at their own expense, to confer; to compact and coordinate their energies to aid in developing a highway project of such large present and such vast potential importance to other people's prosperity.

Reports showed that the great highway hoop is taking practicable form; attracting actual roadbuilding work to itself because this organization is behind it. In Arizona, the past year, about $1,000,000 was spent on sections of it. In fact the whole 6000 miles of the system is travelable except through Glacier National Park, about 50 miles, and that is to be fixed because this body called attention to it.

The association now is financed chiefly by means of individual memberships. Contributions from regions it will benefit petered out.' Three field secretaries, one in the Rocky Mountain region, one in the Pacific Northwest, one in the Pacific Southwest, are busy getting new members, i. e., new workers for the route. Dues are $12 a year.

Montanans at the meeting said the touring traffic on the route means more for their state than the copper industry.

Its meaning also is clear to those who, at the convention, had it give the West Side route, in Sacramento Valley, equality with the East Side; the river divides them.

Sacramento, knowing the organization's value, said it with a banquet, and a welcoming speech by Secretary Dudley of its chamber of commerce.

A real valuation was the Sacramento Union's editorial suggesting that the association go as far as it likes in getting tourists to spend a week in each major place on the route; with implied emphasis on "spend."

Wisner Gillette Scott's resolution against crass commercialists hogging national park water power won unanimously.

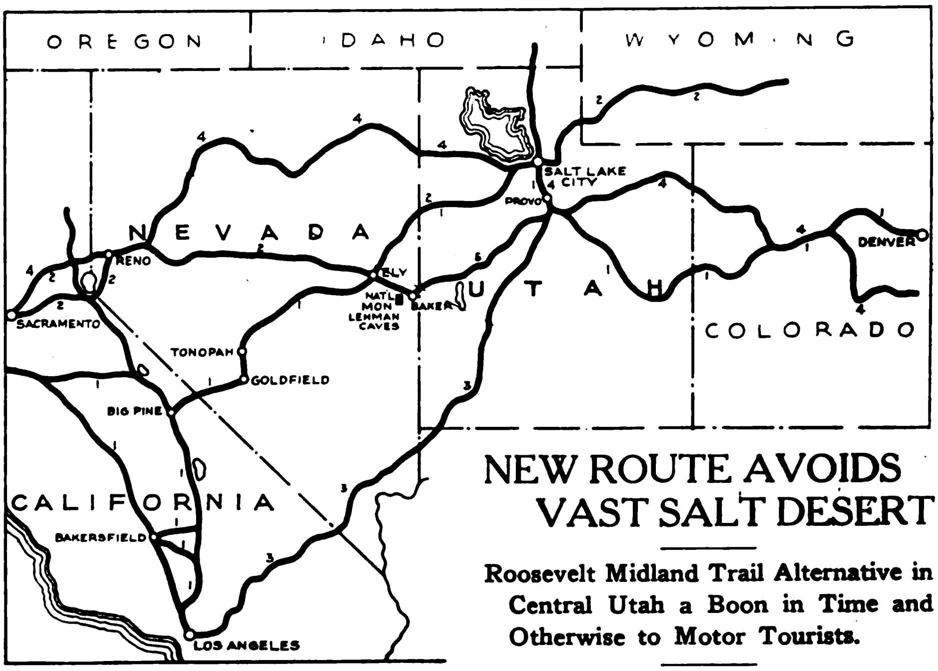
So did a resolution against hurting commerce by separating the Southern Pacific and Central Pacific railways.

Sympathy was shown with protest by C. C. Cottrell, good roads bureau head of California State Automobile Association, against gradual political disruption of the Forest Service, affecting its power to help develop commercial roads near or through the great national forest regions.

Plans to get travel bureaus to tell the world about the park-to-park way around the Great West, were discussed.

Portland is the 1923 convention city. Scott Leavitt, of Great Falls, Mont., continues as president, and Gus Holms', formerly of Montana and said to be the daddy of the idea resulting in the association, continues as manager, giving the work his whole time for $5000 a year—real money, at times—with headquarters in Denver. L. L. Newton, Cody, Wyo., also continues as secretary, without pay. The Rev. Father C. Fabre, of Flagstaff, Ariz., nationally known teacher of what better roads mean, was elected a vice president.

Directors elected are: Nevada, Senator E. W. Griffith, Las Vegas; California, A. L. Connard, Red Bluff; Arizona, Judge L. B. Root, Winslow; Oregon, Sydney B. Vincent, Portland; New Mexico, T. F. Smalling, Gallup; Colorado, G. V. Hodgkin, Canyon City; Washington, William Davis, Newport; Wyoming, L. L. Newton, Cody; Montana, Dr. S. F. Livingston. These will elect Utah and Idaho directors later, those states not being represented at the meeting.



MAP CONSPECTUS OF TRANSCONTINENTAL SITUATION IN UTAH AND NEVADA.

1—Portion of National Roosevelt Midland Trail connecting Denver with points west including Los Angeles, and San Francisco via Central California. 2—Lincoln Highway shown similarly. 3—Arrowhead Trail, Salt Lake City to Los Angeles. 4—Victory Highway, similarly to Nos. 1 and 2. 5—Grand Central Highway, adopted as alternative of No. 1 to avoid Great Salt Desert in Utah.

NEW ROUTE AVOIDS VAST SALT DESERT

Roosevelt Midland Trail Alternative in Central Utah a Boon in Time and Otherwise to Motor Tourists.

Ever see two dogs fight about a bone while another ran away with it? A terrible row is on, between not merely two but several organizations and sections, about whether the lucrative transcontinental tourist, chiefly, but also others, shall traverse Great Salt Desert, west of Salt Lake City, to and from the Coast, by Lincoln Highway or Victory Highway. Both routes through the desert are said to be "absolutely rotten." This description was confirmed late in May when a Durant Six was driven east to Salt Lake City on the former, and back on the latter.

Some day both routes may be fit for travel. Meantime, those who for one set of reasons or another are adherents of either, are damning those urging the delights (!) of the other.

Meantime, also, Wisner Gillette Scott, Californian and vice president of National Roosevelt Midland Trail Association, has been busy on a wiser plan. The desert route mostly known as Lincoln Highway is the one chosen originally for Midland Trail, it having been adopted later by the Lincoln organization. Instead of getting into the unprofitable fight over one or the other desert route, Mr. Scott has had adopted, by his association, an "alternative" route which, while it entails driving 100 miles farther between Salt Lake City and Ely, Nev., at which point it joins the original route, saves 2 hours or more of time and avoids the desert altogether. It also enables tourists to visit the wonderful Lehman Caves, near Baker, Nev., now a national monument and far more marvelous than Mammoth Cave, in Kentucky.

This new route, called Grand Central Highway, connects Santaquin, near Provo, Utah, and Ely, Nev.

"RICK" BECOMES A PUBLIC UTILITY

Calls for Talks Grow Like Compound Interest as Their Universal Quality and Range Becomes Known.

Capt. Eddie V. Rickenbacker, ace of aces, and vice president of Rickenbacker Motor Car Co., Detroit, has become a public utility, much in demand. His chief service, desired to be delivered personally, is the utterance of thoughts, eloquent not only in words but in their prophetic, hopeful, noble and, withal, very practical application to a wide range of human need.

Reports of his many talks on the Coast since he reached San Francisco, June 12, prove that every talk creates calls for two or three more. It is the kind of talks that causes this.

At a Palace Hotel luncheon in the Bay City, June 20, he was guest of the American Legion division of the Rotary Club. Leon J. Pinkson, automobile editor of the Chronicle, said his talk "impressed his hearers not only with his knowledge of the subjects he discussed, but his vision of future conditions, and his ability to force some of them, at least, through to a practical and beneficial conclusion."

In Los Angeles, June 22, "Rick" reached many thousands of minds in Radioland from KHJ, the Times broadcasting station, with the meatiest kind of an aviation talk, which ended with this bookful in brief, in confidence:

"Not until we have confidence in tomorrow, confidence with a smile between individuals, confidence between corporations, confidence in our President, confidence in our Government and confidence between nations, will we have peace, meaning prosperity, health and happiness for all."

Rickenbacker praised American womanhood in an address to the Veterans of Foreign Wars. Also, he was guest at the Athletic Club, meeting the dealer organization of Leon T. Shettler, who "complained" good humoredly that "Rick" had "dragged him from retirement" to become his distributor. At this dinner Rickenbacker told, naturally, about how his car was developed, but his broad and far view of developments generally was evident there, as it is everywhere.

"Rick" says the radius of commerce and human contact, though much increased by the automobile, will be extended far more by air traffic. We all know that—but it's the way he tells it that wins.

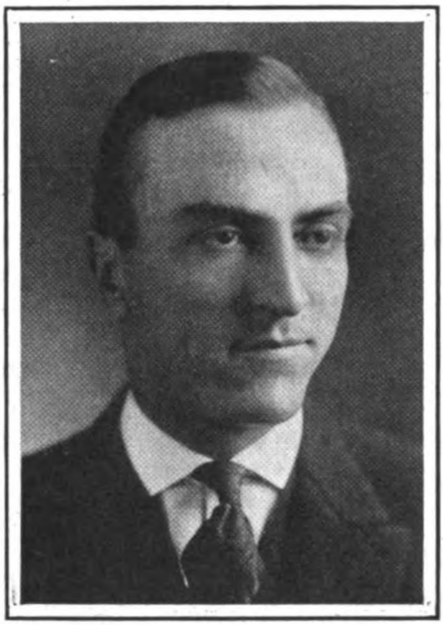
From Los Angeles this popular public utility returned to the Bay City, before leaving for Detroit. San Francisco was told by him that its district soon will have many automobile assembling plants, for both the domestic field and the Orient.

Twenty-Two Lose Licenses.

It's a sad world, mates. In May, 22 California motorists lost their licenses for violating the state motor vehicle law; ten of them for a year, the other 12 for 30 days or more. Twenty had driven too fast, the other two had parents who requested revocation. In May, for the first time in many months, there were no revocations for driving while drunk. The June news is due about the middle of July.

Yosemite "Gas" Is Altitudinous.

A price of 35 cents a gallon in Yosemite National Park, reflecting the cost of transportation by motor truck or rail from the refinery, has been approved by the Government. Fluctuations of prices at the refinery will affect Yosemite prices in proportion. Travel eastward and westward between Yosemite and the outer world is to be made more comfortable and safer by establishing filling stations at Tuolumne Meadows Lodge, on the Tioga Pass Road; at Hetch-Hetchy Lodge on Big Oak Flat Road; and probably also at Chinquapin, at the junction of the Wawona and Glacier Point Roads.



CAPT. E. V. RICKENBACKER.
"Rick" resembled this picture somewhat in 1920. He could write a good letter then. Today he can put over a speech rich in practical vision.

Knows What Not Being So, Costs.

Stanley Mitchell, secretary of Automobile Club of Southern California, is said to be Los Angeles' most careful motorist. He is in position to know it is expensive to be careless.

Come Motor Inn, Come Rodome.

The Motor Inns of California, with a fine nucleus in Los Angeles and a site bought in Fresno, for motor tourists' especial accommodation, Motor West has described. Comes now the Rodome—same idea, different name. Like the other, to be numerous—if. Each unit to be a replica of all the others in the system—one-story fireproofed bungalows, with paved enclosed court, all on a 4 acre site, to house comfortably 420 persons and 40 cars.

Daily change of linen; steam heat if needed, hot and cold water, individual bath, kitchenette with gas or electric range, pans, pots and dishes and built-in breakfast nook, fireproof garage, next door, a night-and-day cafe, store, service and supply station—gosh! Thus the Rodome is to equal or outdo the Motor Inn idea, which costs two persons only $1 each per day, or one person, alone, $1.50. Oh Broadmoor, Colorado Springs, $12 a day, where would be thy sting, with such an outfit near?

The Rodome plan, to begin in Sacramento, is that of American Travel System Corp., leaders in which are Charles B. Bills, of Sacramento; George A. Phillips, Spokane; Clinton E. Miller, Los Angeles; Brous C. Beck, Seattle; E. W. Murphy, Los Angeles; W. D. Whitcomb, Portland; Harry A. Flood, Tacoma; and Bert E. Hillborn, field representative, who late in June was in Sacramento.

First National Radio Tour.

The first automobile with a radio receiving set, to be sent around the country, left Detroit June 1 and reached Denver June 18, en route to the Coast. It is due in San Francisco July 10. It is sponsored by Detroit's board of commerce, Lincoln Highway Association and Detroit Automobile Club, to tell the world Detroit is on the radio map as well as being its motor car manufacturing hub. The car receives concerts that are on the air at noon and night, some of them long distances from the car. Its amplifier transmits the programs to great crowds.

The car has a powerful receiving set, with three stages of radio frequency and three of audio frequency amplification. A ten-turn loop aerial is built around its top, although a temporary aerial, carried on a reel, is unwound and stretched from some flagpole or building, when needed.

The car's pilot is Wallace Blood. His wife rides with him. There is a supply car, occupied by Mr. and Mrs. O. W. Heinz and their three children.

Brakes O. K. today may be dangerous tomorrow. Watch 'em.

C.A.T.A. MAY USE FLAT PRICE IDEA

California Automobile Trade Association Convention Gossip May Mean a New Square-Dealer Method.

In the near future, you, Mr. and Mrs. Motorist, your children and all your relatives, will know just about what your automobile repairs will cost, before the operation is performed, instead of hoping against hope before the event and almost dying of the shock afterward.

That is, if you are in California, and if the belief, and the honest, co-operative wish that is father to it, of many worthwhile men whose business it is to earn and take your money, prevail.

Many of these worthwhile men, engaged in automotive lines, have had the belief a long time that not only an approximate but an exactly flat rate method of charging for service, based on careful cost accounting, would be well to adopt; and P. E. Chamberlain, once a Cadillac dealer in Denver, made a big impression on them by showing how much better it paid him than the present generally used method.

That may be said to be the biggest semblance of news sensed in pleasurable social turmoil at the annual convention of the southern division of California Automobile Trade Association, held in classic Pasadena, June 26-27.

The 26th was crafts day. Each craft, a sub-unit of one of the 42 local associations comprising the state body of more than 2000 individuals, met on that day. The general session was held next day. The get-together-and-discuss work of the local organizations, and the crafts which compose them, goes on through the year. At the conventions, what is done is done so quickly that it is but a finishing touch, and an ordinary newsgatherer easily might get the impression, from the general session—which is all he sees or hears—that nothing much is going on. That often is true—it already has gone on, and gone in—been absorbed into the inner consciousness of the members. The only way for outsiders to get the news is to mingle around and pick the evanescent stuff out of the circumambient atmosphere.

The gathering in Pasadena numbered several hundred; from all over the Golden State. President George Haberfelde of the state body, of Bakersfield, who returned from Hawaii recently, presided. Robert W. Martland, secretary-manager, headquarters Oakland, presence almost anywhere in the state and hitting nails on the head like an electric riveter all the time, was there in every respect. Both spoke at the banquet held the evening of the first day in Hotel Maryland, at which the principal speaker was P. E. Chamberlain of St. Louis, representing the National Automobile Dealers' Association. He lectures to automotive men. His topic was Selling Service Intelligently. He made it plain that service is the real thing one sells or fails to sell—the object passed over the counter, or the motions gone through merely as such, are mere symbols of the sale; and service is not sold really unless it is put over intelligently.

And while Mr. Chamberlain was at it, he put over his flat-rate-charge idea. That is, it was not adopted officially by the association, but that may follow logically if, as seems very likely by the impression it made, it is adopted unofficially by a number of those whom it gripped when they learned how it not only had pleased customers but simplified Mr. Chamberlain's business and increased his profits.

DO YOU REMEMBER—

Pumping tires by hand?

Filling the side lights with kerosene?

Buying gasoline for 9 cents a gallon?

Cranking the car about midway on the side?

Using the steering handle instead of a wheel?

Wearing goggles, gauntlet gloves and a "duster"?

Storing the machine away for the winter?

Paying extra for headlights, top and windshield?

Hiring a team of horses to haul the car back home?

Entering the car by way of a door in the rear?

When all the neighbors came to the front door and windows when you started out for a ride?

Stopping several times on the highway and shutting off the engine to allow drivers of horses to get past without having a runaway?

The toastmaster was the Rev. Dr. Leslie Learned, rector of All Saints' Church, Pasadena. The invocation was by the Rev. S. G. Livingston, of South Pasadena Presbyterian Church. The address of welcome was by C. W. Kolner, city manager of Pasadena.

The host de facto for the occasion as a whole was the collective membership of the Automobile Trade Association of San Gabriel Valley, which has an office in the Chamber of Commerce, Pasadena. Joseph A. Moore is president; E. L. Pauley, vice president; J. E. Harriott, secretary. The association has about 100 members.

At the general session, at which Mr. Chamberlain's flat-rate success was told about again, the fine work the association's illuminating engineers are doing to help the public use its headlights right was told about by "Bob" Martland. The degree of ignorance as to this, and the delight when this ignorance is removed, are said to be surprising.

The general session lasted from 9:30 a. m. to 2:30 p. m. It was lively constructively, not the other way. It put even more pep into a body of men who, since their association was organized, have learned the value of studying pep co-operatively.

Accompanies Automotive Chief.

At San Diego, July 6, Gordon Lee, chief of the Department of Commerce automotive division, will begin his Pacific Coast talking tour. His big subject is the need of folks in this country understanding the importance of foreign trade to them all. July 7 he will speak in Los Angeles as the guest of the Rotary Club, Motor Car Dealers' Association, and Los Angeles Automobile Trade Association. The latter is the local unit of California Automobile Trade Association, the secretary-manager of which, Robert W. Martland, will accompany Mr. Lee during his entire tour through California. Dates following Los Angeles are: San Francisco, July 12; Medford, Ore., July 14-16; Salem, July 17; Portland, July 18-19; Olympia, Wash., July 21-23; Seattle, July 24 and 26-28; Tacoma, July 25; Spokane, July 29.

Lassen National Park Development.

Development of Lassen Volcanic National Park in Northern California, is assured. This section, which will provide a new touring paradise for motorists, may now be developed through removal of an inhibition which limited funds to not more than $5000 per year. Passage of this bill by Congress clears the way for additional appropriation for development of the work.

Peninsula Railway Has Poor Year.

Despite having only one highway to do it with, motor traffic on the peninsula south of San Francisco probably did much to make the Peninsula Railway's trolley system's operating loss $18,119 in 1921. The net corporation loss from all sources was $362,536 for the year, and the accumulated deficit $2,383,269. Operating revenue in 1921 was $344,302.

Ad Men's Motor Car Caravan.

In addition to streaming into flag-decked San Diego by steamer and rail, June 24, they had a motor car caravan, and then some, to the same city, did the delegates to the Pacific Coast Advertising Clubs' Association convention.

TIRE COVER AND LUGGAGE EXPERTS

Bailey-Fitwell Company's New Plant a Result of Twelve Years of Genuine Service to Pacific Region.

West of the Rockies there are 1,500,000 owners of automobiles, each a real or potential buyer of tire covers, or a trunk or case or other form of motor luggage carrier.

Twelve years ago Bailey-Fitwell Co., Los Angeles, began making those things and making them well, and selling them to an ever increasing part of that 1,500,000. The annual turnover in its Grand Avenue plant grew to $250,000. In its new plant, at 1317 South Olive St., pictured on this page, it expects to treble that development of 12 years, quickly. The 1 story class A construction shown is designed to uphold two more stories, and the product and the personnel behind it promise that before long another picture will show them.

The new building, of brick, tile and stucco, is of Spanish type. It was built by the owner of the 50x257 foot site to the company's order. It and the land represent $100,000. The company's machinery and working capital represent another $100,000. The establishment's floor space, including mezzanines, is 15,000 square feet. It is lighted profusely and thoroughly modern. It comprises splendid offices, occupying 30x50 feet; tire cover manufacturing room, 50x140, with 32 power machines and other tire cover making machinery; rest room and restaurant for feminine employes; a 50x80 trunk and case factory, with art department mezzanine; and an automobile and equipping station.

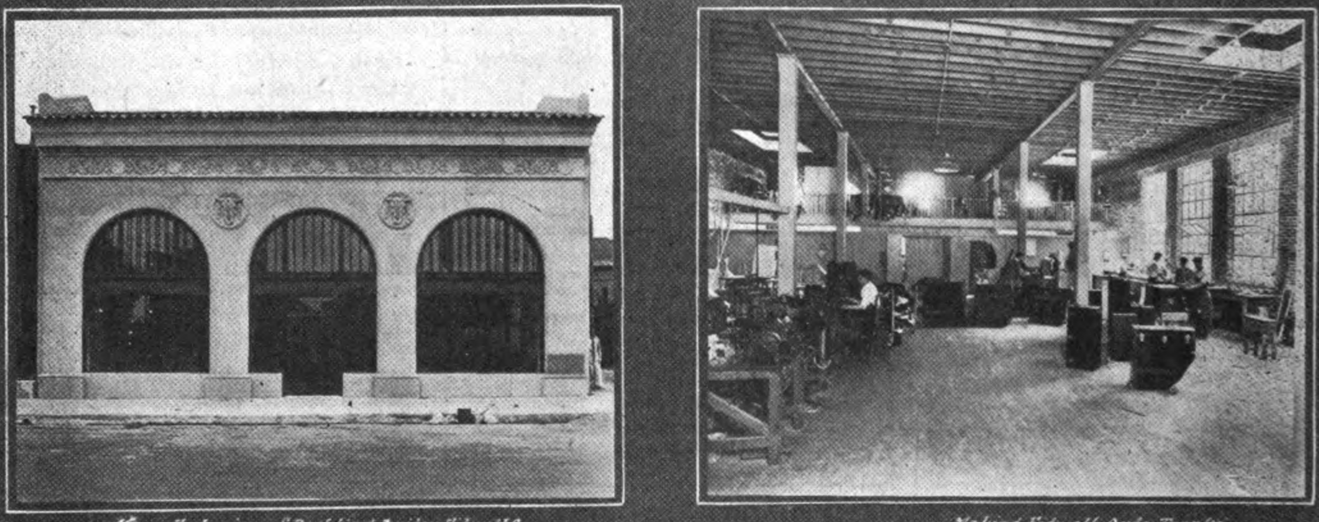
On a variety of stock and special tire covers a heavy trade has been built up, as on an assortment of luggage carriers and holders, including many stock patterns and a special order department in which, also, are produced many leather specialties used in fashionable cars.

The officers are: Earl Sandusky, president and general manager; Daniel Daugherty, vice president; J. A. Prior, secretary-treasurer; Walter T. Clarke, sales manager; E. J. Lindsay, factory superintendent.

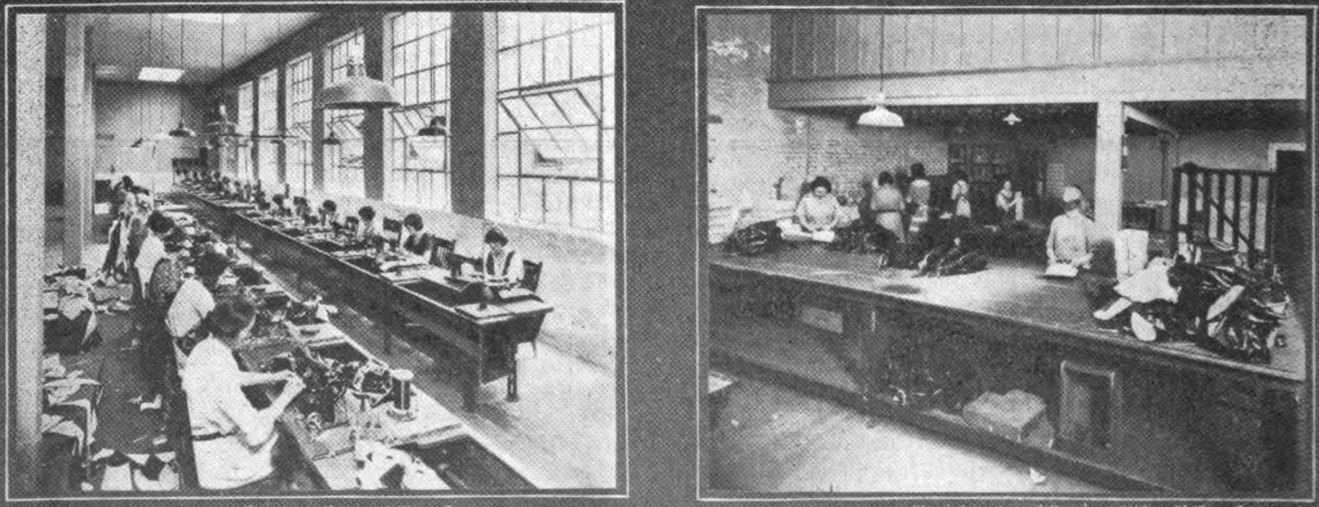
After Yucca Hounds.

Yucca trees, lovely cream-white-plumed beautifiers of the foothills for weeks if let alone, dead quickly if uprooted, may not be exterminated in and around Los Angeles County if a county misdemeanor ordinance is the result of a proposed one in South Pasadena, forbidding transporting them. A South Pasadena trustee counted more than 100 motor cars, each carrying one to six, on one Sunday.

The general active attitude toward forests is to burn 'em up or cut 'em down.



45 Exterior of Building Bailey Fitwell Co. Making Fitwell Auto Trunks



Sewing Fitwell Tire Covers Finishing and Boxing Fitwell Tire Covers

EXTERIOR AND INTERIOR VIEWS OF BAILEY-FITWELL COMPANY'S FINE NEW ESTABLISHMENT IN LOS ANGELES.

JOY AND TAX DATE PORTLAND FACTORS

Rose Festival and License Fee Change Merely Defer Sales, and June Was a Month of Fine Business.

Except for two disturbing factors, June business was excellent in the Portland territory. The factors are the annual Rose Festival and the reduction of the state automobile license fee due on July 1.

The two should be reversed in order of importance as distracters of attention to normal affairs. In Oregon a full year's fee is charged on cars licensed from January 1 to June 30, inclusive, but on July 1 the fee is cut in half, and October 1 is cut to one-fourth. As July 1 draws near, prospective buyers are inclined to hold off until after July 1. On larger cars the saving amounts to $20 or more.

The dealers expect to reap the delayed harvest early in July.

The Rose Festival also stayed business a bit, despite the fact that it drew many people to Portland. Folks are not inclined to buy cars during festivities, and very little business was reported during the festival week.

Yet June was far and away better than June of last year, and comparable with June of 1920. For many of the leading firms the month was not quite as good as May, 1922, however.

The interruption late in June helped dealers to catch up on unfilled orders. There is no doubt that a couple of weeks ago a real new-car shortage faced Portland. Several dealers in the best known makes were unable to make immediate deliveries.

The splendid come-back of the automobile business this spring was one of the greatest feats in the history of American industry, according to George M. Graham, vice president of Chandler Motor Car Co., Cleveland, O., in an address to the dealers of Portland, where Mr. Graham, on a tour of chief Coast cities, spent two days. He was taken over Columbia River Highway and was the principal speaker at a meeting of the Portland Ad Club on Flag Day. Later he was given a dinner by the Portland dealers. He was the personal guest of C. C. Fagan, Oregon Pierce-Arrow and Wills Sainte Claire dealer; an old friend.

Murphy Motor Car Co., headed by Thomas W. Murphy, a pioneer used car man, will distribute the Auburn car in Oregon and the Columbia River counties in Washington. Mr. Murphy has been in the used car business in Portland five years, and in business there many years. His quarters, Sixteenth and Alder Sts., have been completely renovated and rearranged for the Auburn business. This is the first new car he has handled. The deal followed his visit to San Francisco, to look over a number of cars available for the Portland district.

A. L. McCarley, agent for the Stanley steamer in the Portland territory, has taken the Templar also, closing with W. E. Young, special representative of the Templar Motors Corp., Cleveland. W. W. Wray, who had the Templar agency, will head the Templar force for the new distributor, who will adopt the name McCarley Motor Co.

W. L. Bartlett, for the past five years president and general manager of Perfection Tire Co., has resigned to take up other lines of business, it is announced at Portland, where Mr. Bartlett has made his headquarters. Bringing the first Perfection tire to the Pacific Coast 5 years ago and opening a store in Portland, Mr. Bartlett built up one of the largest retail tire businesses on the Coast, establishing a chain of stores from Spokane to San Diego.

Portland has been named Pacific Northwest headquarters for the Mac-Dry battery. A. B. Jordan and J. B. Lafaver, at Broadway and Hoyt Sts., have the distribution for Oregon, Washington and Idaho. The Mac-Dry battery is a new type, using a dry compound instead of a liquid. It is manufactured in Los Angeles, where it is said to have met with success.

Moreland Motor Truck Co., Los Angeles, has leased a 2 story building, 50x100 feet, at Fourteenth and Morrison Sts., for five years. It will be completely remodeled, and will accommodate the direct factory branch to be established. A large shipment of Moreland trucks arrived in Portland recently.

Mitchell "White Streak" Test.

Mitchell Motors Co., Racine, Wis., manufacturer of the Mitchell car, wires Motor West that because of the continued success of its now famous "White Streak" test car, in its sealed-hood endurance run on the Atlantic Coast, a similar test, with the hood to be sealed by a prominent movie star to be named later, will be started on the Pacific Coast at noon, July 4.

Courtesy Acknowledged.

The two pictures in the June 1 issue, one of Palm Canyon, the other of Camp Cajon, were reprinted by courtesy of Southern California Business, published by Los Angeles Chamber of Commerce.

Take enough blankets along.

Decisions Help Oregon Dealers.

Oregon automobile dealers benefit by a state supreme court decision in a tax case involving personal property taxes on cars in possession of dealers at the time of the annual tax levy, March 1. In the first of two decisions handed down on a case involving the 1920 law it was held that dealers would have to pay personal property taxes on all cars held by them on March 1 of that year and not licensed under a private number. The blanket dealer license was held not to cover these cars.

In the second decision, based on the 1921 law, which had been amended slightly from the 1920 statute, it was held, however, that dealers would have the period from March 1, the date of the annual tax levy, until July 1, to dispose of all cars held by them under dealer licenses, and that they would have to pay personal taxes only on cars owned by them on March 1 and still in their possession July 1. Sale of the cars between those two dates, it was held, was sufficient proof that personal licenses had been taken out and that, therefore, further taxes should not be exacted.

The result of the two decisions will be that dealers will have to pay a considerable sum as back taxes for the 1920 assessment, but virtually nothing for 1921 or later. Practically all the dealers effect a complete turnover of stock between March 1 and July 1, except perhaps for used cars, which generally are under personal license anyway and therefore exempt from further taxation. Both suits were brought by the Automobile Dealers' Association of Portland, although in the names of individual dealers.

Kissel's Fast L. A.-Portland Run.

Mrs. Helena Hoffman, of Los Angeles, intending to go with her Kissel De Luxe sedan on the steamer Senator to Portland, missed the boat. Knowing her parents expected to meet her at the Portland wharf, and not knowing just where they were stopping, she left in the Kissel, nearly 48 behind the steamer. By 62 hours of day-and-night driving, with practically no stop in the 1300 miles, not only was the ship beaten to Portland by a wide margin, but train time was beaten also.

Concert of Other Days.

All day long, during the Shriners' conclave in San Francisco, magnified singing voices broadcasted through huge horns, kept music "on the air" in the business district. Must have reminded of the concerts automobile horns used to play, a few years ago.

With us again—forest fire fools.

TRUCK PLANT SOON IN SAN FRANCISCO

Indiana Company's Branch Factory Is Recognition of Opportunities on the Coast—Other Bay City News.

Announcement of the intention of Indiana Truck Corp., Marion, Ind., to establish a Pacific Coast branch factory in San Francisco, and to have it in operation by autumn, turning out Indiana trucks, is perhaps the most notable fact of the past two weeks in automotive trade activities in the Bay City.

It means another significant recognition of the fact that big opportunities exist and loom, in the Pacific region —from Denver to Hawaii and beyond.

Building of the plant will be begun soon. It will be in charge of C. M. Menzies, the company's Western district manager, head of Indiana-Pacific Truck Corp., San Francisco, in the name of which the new plant will be operated.

The move is to meet the demand for this truck throughout the region west of Denver, including the Hawaiian Islands.

Engines and some other parts will come from Marion, but all other parts will be of Coast manufacture.

Also, chassis will be manufactured to meet special needs of customers in hauling, lumbering, oil and mining operations, deliveries to be made in a few days after receipt of orders.

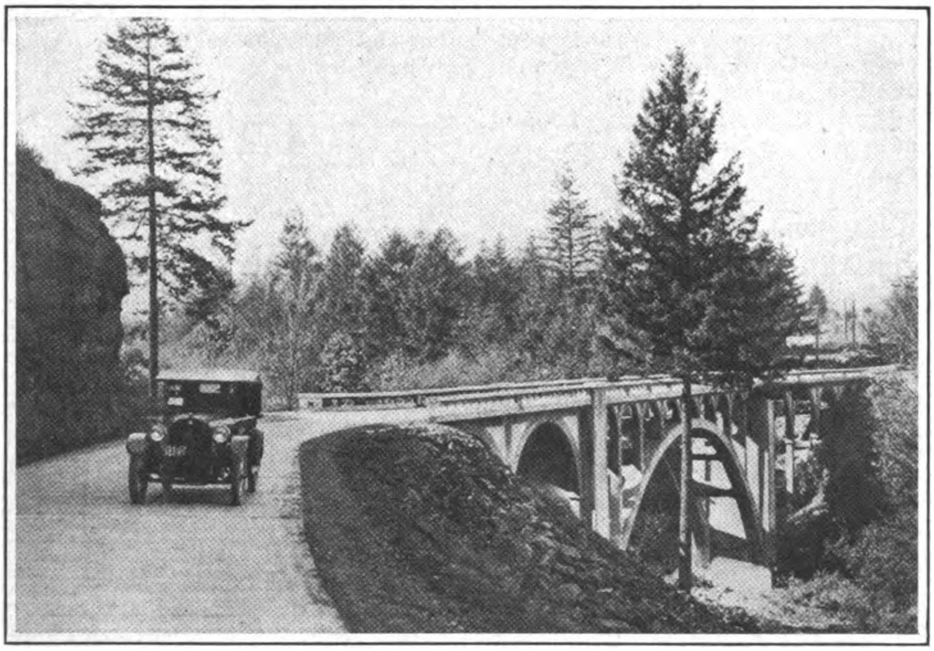
Mr. Menzies went to Marion headquarters early in June, the first in 5 years. He took along an order for a large fleet of trucks. Several carloads have been shipped to San Francisco so far this year. Mr. Menzies was much impressed by the increased facilities in the Marion plant, but a separate plant on the Coast is deemed a wise and necessary move.

Another San Francisco development is that Walter M. Murphy Motors Co., which remained distributor of Lincoln cars in California after the Detroit plant was bought by Henry Ford, has added Ford car and truck and Fordson tractor sales to its activities.

In past years, winter and spring have been the really active seasons for introducing new models from the factories into the Pacific region, but in San Francisco the frequency of new arrivals seems little affected by the usual summer quietness. The Stanley 7 passenger sedan, Hudson 4 passenger phaeton, Chandler 5 passenger touring, Cole 8-90 types, and Dorris sport model are newcomers.

C. T. Dunkle has been made general manager and treasurer of Cole Motors, Inc., San Francisco factory branch of Cole Motor Car Co., Indianapolis. He has held a substantial interest in the branch since last March, and is putting in effect policies which made him one of the most successful of Eastern distributors.

H. A. Seller-Cummings Co., distributor of Auburn and Dorris cars and Stewart trucks, has been appointed sales manager, according to H. A. Seller, president.



CONCRETE ARCHES MUCH FAVORED IN OREGON.

Oregon is becoming known for the handsome new concrete arches on its highways, and the above is one of the most beautiful in the entire state, just completed on Pacific Highway, 10 miles south of Portland. It is known as the Oswego arch, crossing the stream of that name at the point where Oswego Lake empties into Willamette River. Concrete arch construction is highly favored in Oregon for its beauty and strength, and many bridges such as the above have been built in the last five years on the Columbia River and Pacific Highways in that state.

Heartfelt thanks to the automobile-owning public of San Francisco has been issued by William L. Hughson, chairman of the automotive committee which provided for the transportation of the thousands of Shriner visitors during the recent convention. Owing to the remarkable and universal co-operation, cars were available at nearly every moment of the convention, and emergency calls from the committee were responded to almost immediately by great numbers of car owners.

"I simply do not know," said Mr. Hughson through the press, "what we would have done without the aid of San Francisco motorists. We had more people to handle than at any other convention in the city's history. Without your aid we would have succumbed to a traffic problem beyond the existing means of handling it."

Aside the generous spirit prevading the general public, the city's automobile distributing trade backed up its committee with a wholeheartedness and liberality that is admitted to have increased its prestige immensely. Fleets of cars, many of them new models taken from sales floors, were loaned for the great street parades and the long valley and mountain tours in the Golden Gate's vicinity.

The arrangement of the elaborate decorations appearing on buildings, streets, and automobiles was in charge of George A. Wahlgreen.

Mr. Wahlgreen, who has managed the Pacific Automobile Show each year since the initial one of 1917, already is preparing for the seventh annual show, of 1923. He is in the East in quest of new and striking artistic ideas, although previous San Francisco shows, the result of Pacific Coast talent, have been unsurpassed in beauty of decorations and the real car-buying atmosphere.

To Be Mitchell's Coast Manager.

H. I. Toland, wholesale sales manaager of the New York organization of Mitchell Motors Co., Inc., has been appointed Pacific Coast manager. At present he is at the plant in Racine making an analysis of his territory. Los Angeles will be his headquarters.

Mr. Toland will bring with him one of the famous Mitchell "White Streak" flying squadrons, which have caused such a sensation within the industry. These "White Streaks" will be assigned to the various distributors' territories, with instructions to help in all ways possible and thereby fulfill the Mitchell policy of 100 per cent co-operation with its distributors.

LOS ANGELES ITS OWN BIG CUSTOMER

Municipality's Needs, Especially as to Trucks, Form Large Source of Orders as Dealers' Figures Show.

In the ceaseless efforts necessary to keep abreast of the remarkable expansion of population and industrial activity within its limits, the city government of Los Angeles is becoming the largest single customer of the local motor vehicle trade. Motor truck merchants are benefiting by this fact, more and more. The city's needs call for motor vehicles of all kinds and capacities.

The decision to ask bids for 107 motor trucks for the city engineering department naturally stirred the distributors deeply. The bids are in, and being considered. Breathe deeply.

Apart from this large-scale transaction, one distributor, H. C. Degner, head of Electric Garage, agency for C-T electric trucks, announces his concern has received from the city's bureau of power and light an order for 12 trucks of 2 ton capacity.

While practically every distributor business is holding up surprisingly well, considering that at the beginning of summer there always has been a marked falling off from the peak sales of April and early May. There actually exists a mild shortage in many models, not of the harassing kind that occurred two years ago, but a partial famine that stimulates laggard buyers to action, and brightens the future for every motor vehicle merchandiser. Once more, in many cases, the purchaser is filing his order and being told that his car will be on hand for delivery "within 90 days."

During May the sales of Chevrolet cars to the general public totaled 692, and trucks 143 in the city and immediate vicinity. One Chevrolet dealer, Robert P. Fite, selling in Los Angeles and Kern Counties, estimates his business is running at $3,000,000 a year. He delivered 290 cars in May, said to surpass the high mark of any other Chevrolet dealer in the state.

Sales of Wills Sainte Claire cars by Western Motors Co. totaled 139 so far this year—up to June 28—according to Sidney Briggs, manager, and for the 14 months in which the company has held the agency the grand total was 216 on the same date. At the present rate deliveries throughout California should pass 500 in the next 30 days, it is believed.

A new distributing agency is Buffalo Truck & Tractor Corp., opening at 5808 Moneta Ave., as Coast distributor of Buffalo trucks. The factory, of the same name, located at Clarence, N. Y., manufactures the Buffalo truck, which has as prominent features a five-main-bearing crankshaft, patented three-ball extra-radiation system; and two separate transmissions, giving 17 to 1 ratio in low gear, ten speeds forward and one reverse.

Waters Nash Service Co., 1230 South Flower St., headed by J. E. Waters, for several years specializing on Nash car service, has been made an authorized Nash sales agency in the city territory.

New models recently placed on display by distributors are the Reo 7 passenger touring car, and coupe, Moon sportster, Peerless sedan, Duesenberg roadster, and Templar 5 passenger touring and 2 passenger roadster.

Eastern Heads On Coast.

Among recent automotive trade visitors on the Pacific Coast have been H. M. Pulsifer, assistant to president of Mitchell Motors Co., Racine, Wis.; George W. Davis, president of Geo. W. Davis Motor Car Co., Richmond, Ind.: O. H. McCornack, general sales manager of Hudson Motor Car Co., Detroit; E. V. Rickenbacker, vice president of Rickenbacker Motor Car Co., Detroit; S. L. Brunner Mfg. Co., Utica. N. Y.; Harrison BoByce, vice president of Moto-Meter Co. of America, Long Island City; Clement Studebaker, Studebaker Corp., South Bend.

EPITAPHS.

Give thanks, all ye, unto the Lord,
Here lies my first and only Ford.

I cannot complain of
My roadster's endurance,
I buried it solely
To get the insurance.

Caught in the traffic ruck,
Good-bye motor truck.

Here lies the body of my sedan,
Locate the rest no mortal can.
If she hadn't crashed into a landaulet
My old sedan would be running yet.

—N. Y. Evening Post.

Arizona Orders 40,000 Tags.

State Secretary Hall of Arizona announces that Kittle Mfg. Co., Los Angeles, has been given the contract to supply Arizona state and county authorities with 40,000 pairs of motor vehicle license plates. The price will be 14.95 cents a pair, 5 cents less than last year. The plates will be white, with blue numbers. Kittle has been handling similar large contracts from Western states for several years.

New Agencies in San Diego.

The Rickenbacker car will be distributed in San Diego County by Croxall-Lee Motor Co., a new concern, opening at Third and B Sts., San Diego. It is headed by F. J. Croxall and C. H. Lee.

National Motor Sales Agency, recently appointed National car distributor, for California, with branches in Los Angeles and San Diego, has moved the latter branch into new and larger quarters, at First and A Sts.

A notable San Diego change is the taking over of the interests of B. W. Sinclair, Ford, Fordson and Lincoln agency, by Powell Motor Co., of which Charles S. Powell and Charles Johnson are the directing heads. The sale involved about $75,000, and the purchase soon after by Mr. Powell, of ground adjoining the former Sinclair quarters, which he has occupied, to provide for future expansion, brings the total outlay close to $100,000.

Davies-Overland Co. announces it sold 104 Overland and Willys-Knight cars in April, 106 in May, and expected to exceed 125 during June.

Previous to entering the Ford and Fordson field, Powell Motor Co. was San Diego County agent for Lincoln and Wills Sainte Claire cars. R. C. Shannon and H. F. Morgan have bought the latter rights for about $30,000 and have formed Wills Sainte Claire Co. of San Diego, with headquarters at Front and B Sts.

Seattle Trade Activities.

Distribution of Anderson Six cars in Western Washington has been secured by Anderson Six Agency, 501 East Pine St., Seattle, headed by N. W. Smallwood, manager, a Seattle business man of large acquaintance in the Puget Sound region.

James A. Snoddy has resigned as secretary of the Seattle Automobile Dealers' Association to become Portland branch manager for Studebaker Corp. of America. He formerly was wholesale manager of the Seattle branch of Ford Motor Co.

R. C. Dahlhjelm, Stanley steam car distributor in Washington, Oregon and Idaho, has moved to larger quarters, 1530 Melrose Ave., where he will operate a large service department in addition to sales operations.

New models recently arrived in Seattle are the Columbia 1922 types; Dodge Brothers business coupe; Winton victoria; and Dort touring car, coupe, and sedan.

Increased Cost of His Car.

Recently a Los Angeles Federal judge fined a man $100 for transporting one ounce of whisky in his car.

Motor West
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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JULY 1, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

Need Fleecing? Go to Europe

ANYBODY burdened with a surplus of "fleece" in his pocketbook can have his burden lightened to a fare-thee-well by going to Europe; and, despite plentiful evidence of this fact, the number of Americans crossing the Atlantic this year is said to be breaking record.

All Europe is said to be armed for a combined assault upon the American dollar, and fond hopes for capturing it are centered on the American tourist.

Go abroad if you can afford it; but there's a best time for doing it—when you've seen your own country first, and when you are reasonably sure of not being robbed.

Thirst on Our Western Deserts

ONE reason why it is hard to make Easterners, even many city Westerners, understand that American deserts are unlike the all-sand, lifeless Saharan wastes, is that occasionally persons are lost in them and sometimes perish, and the news is "played up" in the papers.

Generally such misfortunes are due to rash departure from plainly marked lines of travel. The whole subject is interestingly treated in an article in this issue, based largely on Geological Survey data.

It is suggested here, in addition, that those crossing our deserts—which some day will not be deserts and even now produce prodigiously in some parts—should be sure to be free of the condition indicated by a "dark brown taste." That invites trouble from heat as well as thirst, which otherwise are noticed scarcely at all by many motorists—a fact that folks in railway trains may not believe. Some who traverse the deserts do not even feel the need of a drink during long hours.

A sensible quantity of water should be carried for emergencies. On the higher deserts, usually there is air movement. In high or low altitudes, a pedestrian supplied with water, and under an umbrella, or a motorist supplied with water and under an automobile top, can wait calmly, if delayed on a main line of travel. Someone will be along presently.

Justice to Motor Truck Driver

HERE it is, the truth about motor truck drivers—not by means of any prompt investigation of the slander that has been piled atop of him for lo. these many moons, even years, but by a devilishly delayed admission, brought out quickly enough when casually put to a man who has been a member of Los Angeles' police force 12 years, on its traffic squad 9 years, and in charge of probing of traffic accidents 7 years.

This policeman says that of all the smashes and mishaps that occur, too many of them fatal ones, motor truck drivers are responsible for only a small percentage. As owners or hired men, he says, they realize their responsibility—whether to humanity or as custodians of valuable loads, he does not say. Our own impression is that a much larger proportion of the trouble could be charged to those who carry a different kind of load.

The police investigator ought to know. Yet a drummer to whom the foregoing was read, and who drives a car constantly, says he often yields his right of way and jams on brakes to escape trucks that cross intersections lickety-split. Well, heavy vehicles are hard to stop quickly; and perhaps commercial exigencies make truck men, like others, press on more than the law holds them back. So, let's give them what credit we can—and keep our asbestos bands in good condition.

Thinking of Building a House?

THIS is an automotive journal; but in the sense indicated in italics under the editorial masthead, it also is a building journal—anything that will build up motoring interests interests us.

Are you considering having a house built? A chart printed in Finance and Industry shows that, usually, not always, building in the country as a whole increases swiftly almost as soon as a year ends, with the peak at the end of spring; then a sudden drop, followed usually by gradual decrease till the next year begins. In 1919, not a spending year, the peak, expressed in dollars—$150,000,000 indicated by permits—was in September; then came a slow and only slight decrease, with zero of energy not reached till February, 1920; then a sudden, short drop; and a gradual easing till February, 1921, the bottom being $38,000,000 above that of 1918 and $50,000,000 below that of 1919. In February, 1921, there was a quick rise; from April a steady period to October, the year's peak—$175,000,000; then only a slight decrease, lasting till February, 1922, when the figures still were very high—$138,000,000. Then—bing! Up to record, $238,000,000, in March, 1922.

Since then the building fever has gone down considerably, and there are signs—such as For Rent signs—indicating a long felt want has been filled, approximately, and—this is the point of this article—that building henceforth, for a while, ought to cost less money.

Don't pay rent if building will save you money, but don't let the builder skin you.

Don't Forget the Sinking Fund

THE same folks who, as individuals, would not pay excessive interest, do so blindly, for indefinite periods, as communities. Much borrowing, called bonding, which often means shackling, tying up, is necessary. It is wise to borrow if one can profit by it, or in dire necessity, and always unwise not to provide a sinking fund with which to pay off bonds on maturity or before.

Some time ago Orange County, Calif., bonded itself for some highway construction which, its leaders were shown plainly, could be done in about the same time on the pay-as-you-go plan, without borrowing at all, and with a huge total of interest saved.

There are many cases of municipalities, especially, going it blind. That of Hamilton, O., a recent one being given publicity, is not a highway case but illustrates the point. Hamilton still is paying interest on a gas plant erected 33 years ago and abandoned 12 years ago; on an electric light plant built 34 years ago; and on water works built 39 years ago. The bonds for the three totaled only $279,999, but the interest alone, to recent date, was $604,799.10. Some of this has been paid from receipts, but taxpayers have had to make up a deficit of $463,533.54.

It all depends. If a highway bond issue costs say 165 per cent in 30 years, at 5½ per cent per annum, but meantime has earned 500 per cent, or 50 per cent per annum, it pays to bond.

Don't borrow unless you have to, or can profit by it; and if you borrow, don't forget the sinking fund.

Roll Away—It Don't Belong to You

WHEN a meteorite falls upon a highway, it does not belong to the casual finder. The road is a mere easement for travel—the land is only borrowed indefinitely from those out of whose private area it is taken.

Therefore, if when out for a drive in a glorious night, you see something blazing down out of the sky and heading for the pike, don't sprint to meet and grab it. Roll away—it belongs to the land owner on the right or left of the center of the road.

One of these heavenly fragments fell in Virginia recently and smashed up some 500 square feet of ground. Its ownership was decided long before it came. In 1890 an aerolite passed over Iowa, a piece fell on leased ground, the tenant sold it for $105, the land owner litigated for the money, and the U. S. Supreme Court decided in his favor. Incidentally it learned that some 700 meteorites hit the earth every year. Not having any proprietary interest in them, rambling motorists now will know that for that reason, if no other, mad haste to get to where one hits is inadvisable.

Lem Loosehead says: Habits gits a man. Saw a fella flick dust off'n a chair that wa'n't dusty. Turned out he sells seat covers 'n' tells o' the turrible damages done by dust.

Everybody's quit doing it—talking of hard times.

Slight Tire-Making Let-Up Expected

The war's abnormal high pressure, and the late not-lamented low pressure, are past. Normal may be said to have returned. That means an approximate return of seasonal dealings, which formerly kept the automobile business at peak about 7 months in the year.

Akron expects a slight production drop in tire plants chiefly supplying automobile makers, in July, and in those supplying dealers about 45 days later. No price drop is expected—stocks are not large, and raw material prices may rise; fabric has, already.

Akron gossip as to relatively low-priced cords is that steel industry practice has been adopted; that is, full value for the money, but not too much to delay new orders overlong.

Employment Figures' Prosperity Song

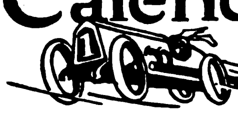
In May, 44 automobile plants employed 100,071 persons, exceeding April by 9.7 per cent and May, 1921, by 8 per cent. In May last the average weekly pay roll totaled $3,393,814, exceeding the average from May, 1921, to then, by 6.5 per cent.

In May the iron and steel industries employed 126,865 persons, exceeding May, 1921, by 18 per cent and April, 1922, by 3.2 per cent.

Some Things Chauncey Passed Up

Chauncey M. Depew confesses, at the age of 88, that he never played tennis or golf, never went hunting, never even saw a baseball game, never rode horseback; but no doubt he will be able to tell the recording angel he has ridden in a motor car; and his record as an after-dinner speaker never has been surpassed.

Calendar of Coming Events



July 3-4—Eastern Oregon's Annual Race, A. A. A.-Sanctioned, at Baker, with $2500 Purse. Auspices Baker County Automobile Dealers' Assn.

July 4—A.A.A.-Sanction Race for $1500 Purse, San Luis Obispo, Calif.

July 4—Eleventh Annual Automobile Race, Tacoma Speedway.

July 15—Grand Prix Road Race in Alsace-Lorraine, Auspices Automobile Club of France.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

July 19-20—National Motorists' Association Convention, Chicago.

Aug. 6.—150 Mile Race on Cotati, Calif., Speedway.

Sept. 4-9.—Spokane's Annual Automobile Show, in connection with Spokane Interstate Fair. B. J. Garnet, Manager.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in connection with Brazilian Centenary.

Sept. 4.—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

Sept. 13-15—Sixth Annual Fall Convention, Motor and Accessory Manufacturers' Assn. Place to Be Selected.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Nov.—Los Angeles-Phoenix Road Race.

Nov. 8-12 (tentative)—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 11—500 Mile Race on Cotati, Calif., Speedway.

Nov. 13-28—Automotive Equipment Assn. Annual Show, Chicago.

Nov. 30 (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

December—Annual Automobile Salon, Hotel Commodore, New York, During N.A.C.C. Show.

January—Annual Automobile Salon, Chicago, During N.A.C.C. Show.

Common Sense on Deserts

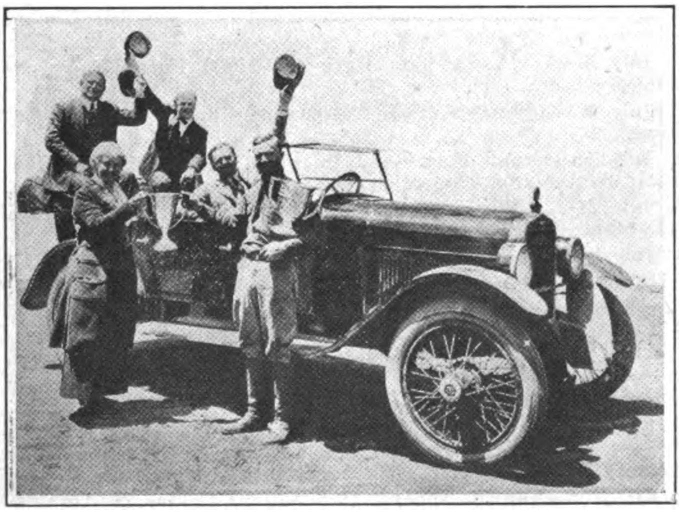
Misinformation About Alleged Barren Wastes Corrected, Good Advice Given by Government

DESERT lands are not, as some of our Eastern friends imagine, barren wastes devoid of animal and vegetable life. San Bernardino County, California—the largest county in the United States—is practically all within the desert region, but it contains numerous cities, fertile plains and rich mines, with every indication of untold wealth below the surface. Records show that in the past quarter of a century, mineral products to the value of fifty million dollars have been shipped out of this county.

To make this immense, and potentially rich, district safe for prospectors and others who have to travel through it, the Geological Survey, under an appropriation from Congress, has surveyed, mapped and signposted it. Water Supply Paper 490-B, recently issued, covers the desert part of San Bernardino County and the adjoining parts of Los Angeles and Kern counties. It contains relief maps, showing the roads and watering places, and logs giving distances between towns, watering places and easily recognized points, with brief statements as to where supplies can be obtained, choice of route, character of roads and quality of water.

Parts of the Mojave desert region comprised in this report have been mapped and signposted before by counties, automobile associations and other agencies, but definite and precise information in regard to watering places has not been available for most of the region.

Travel by automobile has changed the character of the danger encountered in desert lands, but it has not removed the danger itself. When burros or horses were used by the prospector, he found it necessary to carry with him water for himself and his animals. The dangers of the trip were recognized and the traveler hesitated to venture far from the watering places without adequate supplies. With the automobile, however, it is much easier to get many miles from water and the traveler is more likely to take a long chance that he will reach the next well before his supply runs out. A slight mishap with the engine, a leaky radiator, a dry canteen, a cracked spark plug, or some other minor trouble may mean a tramp of many weary miles and much suffering through lack of water.



OAKLAND THAT DID 49.37 TON MILES PER GALLON OF GAS. Jubilation is registered in the picture, showing the Oakland 6-44 that won the grand sweepstakes cup for all five classes, as well as the cup for the class in which it ran, in the recent Los Angeles-Yosemite economy run. In winning its class cup, the Oakland competed with 6 cylinder cars priced from $1000 to $3000. There were six cars in the class. The ton mileage was ascertained by dividing the car's gross weight by miles traveled (360), and dividing by number gallons of gasoline used. The gross weight included the car, the passengers, their baggage, full gasoline tank and spare tires. The run was of the Wild West kind, with mud and mammoth mountain grades to conquer. No weak car could make it; in fact the A.A.A. contest board representative wanted to end it incomplete, but somebody went on and the rest followed. In addition to its other records the Oakland averaged 29.38 miles per gallon of gasoline, the highest of any 6 cylinder car and only exceeded by two others, both fours, which did a fraction of a mile more. The Oakland had no adjustment in the run and examination showed no oil used in the round trip of 720 miles, and only 2 pints of water. It was a stock touring car, with the special 15,000 mile written guarantee.

Only two permanent rivers are found in the Mojave desert—the Mojave and the Amargosa. Many mountain streams emerge from the canyons on to the alluvial slope, but they sink into the porous gravel within a short distance. From that point, the only signs of a stream are the dry, sandy or gravelly channels formed by the rushing water during heaviest rains. As showing the variations that exist even within the desert region, it may be noted that although Bagdad, on the plains, shows for 15 years a mean annual rainfall of only 3 inches. Little Bear Valley, which is nearly a mile high, has a mean for 22 years of over 31 inches.

Contrary to common opinion, chemical analyses show the majority of desert wells and springs are not heavily impregnated with alkali or other deleterious mineral matter. The water from them is, in fact, as good as or better than water supplied to some cities in less arid states. Most of the water not positively distasteful can be used for drinking in small quantities without harmful results. If consumed in large quantities, it may cause "disturbances," but usually these are of a temporary nature. Most of the dangerous waters are so distasteful that travelers will not swallow them unless driven to it by intense thirst.

Monotony and vastness are the two characteristics of the desert that impress the traveler. While many different species of vegetable life are found, the landscap is dominated by one or two. Close observers may detect the presence of ground water by the occurrence of certain plants, but they are not a dependable guide in all cases. Where ground water is close to the surface it is common to find such growths as the mesquite, cottonwood, desert willow, arrowweed and salt grass.

After mentioning the equipment that should be carried by travelers who expect to go far from towns or other places where supplies and help can be obtained, the author of the paper suggests carrying two strips of canvas about ten yards long by 18 inches wide. These strips usually will give the car sufficient start to enable it to pass the worst stretches. Care must be taken to place the canvas under both front and rear wheels.

Water-Supply Paper 490-A, previously issued, covers the Salton Sea district. Papers 490-C and 490-D, covering the southwest corner of Arizona, are to be published in the near future.

Wants National Show Held in St. Louis

A campaign to move the national automobile show from Chicago to St. Louis was inaugurated recently by Webster Colburn, who has resigned since as vice president and general manager of Dorris Motor Car Co., St. Louis. Mr. Colburn urged the change in letters to Alfred Reeves, general manager of the National Automobile Chamber of Commerce, and to each member of that body. He expected to enlist in the movement the St. Louis Chamber of Commerce, of which F. W. A. Vesper, president of the Vesper Buick Co., is president; as well as the members of the St. Louis Automobile Dealers' Association. Mr. Colburn's letter to Mr. Reeves stated that the Coliseum and Armory in which the Chicago show is held are inadequate, and directed attention to the Chevrolet Building in St. Louis, used for the last two shows in that city.

One oil journal explains, as to the growing impression that gasoline prices are uppish, that gasoline cost is only a small part of motorists' expenses. Comforting.

Automobile shows scheduled for this country this year total 44.

Stockholders the Losers

Willys Corp. Outlook Is, Only Claims Will Be Paid—Maxwell was the Next to Top Bidder

FOLLOWING the recent auction purchase of the great Elizabeth, N. J., plant of Willys Corp. by W. C. Durant, for $5,525,000, it is said prospects are good that bank and other creditors will be paid; that when all plants are sold there may be a little money left for holders of the $15,000,000 of first preferred stock; nothing for those holding $7,650,700 of second preferred, and nothing for holders of no-par common, 4,450,000 shares.

Following appointment of receiver in November last, claims filed totaled $24,000,000, of this a little more than $11,000,000 being for notes payable, and $13,000,000 being claims of merchandise creditors and builders of the Elizabeth plant. It is said some claims were padded, and that the total may be figured down to $19,000,000.

Actual liquidating value of Willys Corp. is said to have been about $1,000,000. Add to that the Elizabeth auction price, $5,525,000. C. O. Mininger has bought the Toledo and Fostoria plants of Electric Auto-Lite Co., the Willys Corp. auxiliary. If that sale is completed, add $4,700,000; and if the New Process Gear Co. plant in Syracuse, probably to be offered at once, is sold, add say $2,000,000 more. Notes and accounts receivable approximate $4,000,000. Remaining assets include about 730,000 shares of Willys-Overland common, worth say $6,570,000 at current market, which is $9 a share. There are other securities worth, at present market, about $3,000,000. Principal assets therefore total about $26,795,000, if none of the stock prices break.

After sale of the Syracuse plant, Willys Corp. will be merely a holding company, with Willys-Overland stock the principal asset held.

Norman De Vaux, president of Star Motor Co. of California, who now is in the East, wired a few days ago to Oakland headquarters, intimating that the Star car will be made in Elizabeth. Be that as it may, it is said the first Star cars are expected to be on the Coast in about a month.

Maxwell Motor Corp. tried to buy the Willys Corp. plant in Elizabeth, as a step in well defined development plans for domestic and foreign business. Elizabeth would have added 37 acres of factory property to Maxwell's large plants in Detroit, Dayton, Newcastle, Ind. and Windsor, Ont. The Elizabeth plant contains a factory building of 1,950,000 square feet of floor space, a baseball park and a garage. Without this, Maxwell plant area still is noticeable—more than 200 acres, with about 3,000,000 square feet of floor space.

Maxwell's bid for the Willys Corp. plant was only slightly lower than that of Durant. Another bidder, said to have represented General Motors, withdrew after a reported offer of about $4,500,000.

Advertising Managers Swap Ideas

Taking care of the needs and desires of Mr. and Mrs. Jones in the matter of transportation is the present job for the automobile industry, in the opinion of the advertising managers of the National Automobile Chamber of Commerce, who met June 13 at the University Club, New York.

"There are four things fundamental to existence," said Edward S. Jordan, in talking on The Next Big Selling Punch. "These are food, fuel, shelter and clothing. To make each of these available to the public there is required a fifth fundamental, transportation. . . . . There is today a large demand for cars and an adequate production capacity to meet it. But the public is not interested primarily in questions of production; it is interested in what concerns it directly. Humanity is interested primarily in the four great fundamental motives—love, money, adventure and religion. The survival of any product or business depends on how successfully it serves those desires. We come then to the question of serving the customer's needs, getting his point of view, and finding the dealers who are equipped to conceive and carry on this service in their respective communities."

Women have a deciding influence in the purchase of 75 per cent of the cars sold, according to Miss Elizabeth Hallam Bohn, who had made a canvass of 100 sales managers to get data on this subject. Miss Bohn also reported a canvass of 500 women on the subscription list of a leading woman's magazine showed 51 per cent owned their own cars and 8 per cent owned more than one car. Miss Bohn also said that the field of selling cars to single women presented n untouched golden opportunity, as most of the advertising copy today is based on the appeal to men, or to the housewife.

Clyde Jennings, editor of Motor Age, said there is room for great improvement in dealer merchandising. Dealers can display larger and more attractive signs of the cars they are selling and can make a great sales force of their window space.

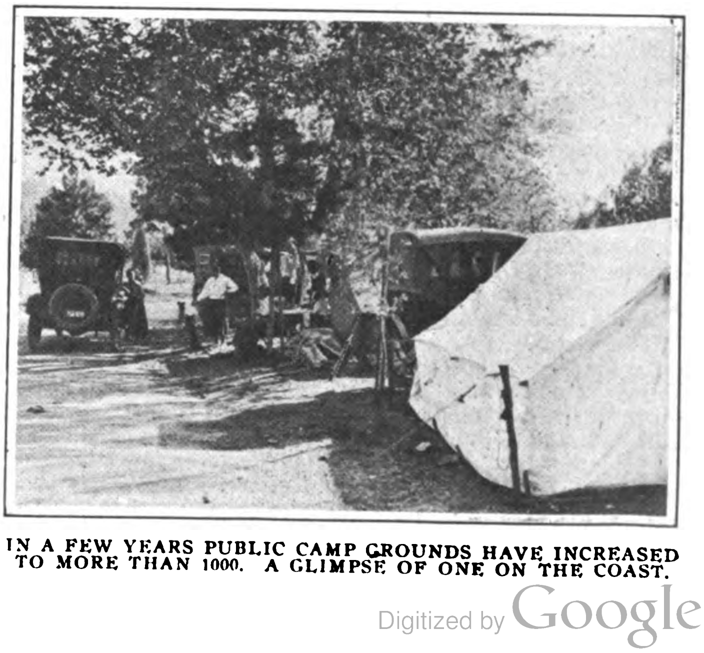
L. B. Dudley, of Federal Motor Truck Co., led the discussion on special problems in motor truck advertising. K. W. Vance, of Paige-Detroit, discussed the place of motion pictures in advertising. G. U. Radoye, of Haynes, spoke on advertising used cars. Ezra Clark, chairman of the advertising council of the Motor and Accessories Manufacturers Association, brought the greetings of that body.

Edward S. Jordan, chairman of the advertising committee of the N. A. C. C. and president of the Jordan Motor Car Co., presided. Other members of the advertising committee are: A. B. Batterson, Buick; L. B. Dudley, Federal; G. U. Radoye, Haynes; W. K. Towers, Paige; G. H. Phelps, Dodge; and John C. Long, N. A. C. C., secretary.

Massachusetts Accidents 45 Per Cent Less

Motor vehicle accident injuries have been reduced in Massachusetts from 21,086 in 1920 to 11,487 in 1921, a decline of 45 per cent. The total will be lowered still further in 1922 if the rate for the first 5 months is maintained. The revocation of 4899 licenses during 1921 had a good effect.

C. W. Seiberling, Jr., son of F. A. Seiberling, president of Seiberling Tire & Rubber Co., has formed a partnership with F. P. Weaver to distribute the Wills Sainte Claire car throughout New Mexico, with headquarters in Santa Fe.



IN A FEW YEARS PUBLIC CAMP GROUNDS HAVE INCREASED TO MORE THAN 1000. A GLIMPSE OF ONE ON THE COAST.

Says Closed Cars Will Lead

Window Regulator Man States Figures Indicating All-Season Types Will Oust Open Ones Soon

By H. H. BUGGIE,

Vice President the Dura Co., Toledo, O., said to be the largest manufacturer of window regulators in the world.

WITHIN the next three years the production of closed cars will equal that of open types, and in six to eight years I believe at least 75 per cent of the production of the motor car manufacturers of America will be all-season types.

This is not a bid for sensationalism. It is a statement based on developments and trends in the industry since 1915; trends which in the last three years have been so marked as to make the prediction an obvious conclusion.

Public demand and good manufacturing judgment are bringing the change about. Taking all cars as a whole, the production of closed cars amounts to 25 per cent of the total. In the higher priced class of cars, the production of closed types is 40 per cent of the total production. I know of one instance, company with a large output, whose closed car program this year calls for 56 per cent of its production.

H. H. BUGGIE.
Vice President the Dura Co., Toledo, O.

Back in 1915, closed car production represented only 1.5 per cent of the total of passenger cars. There was little change even in 1916; but in 1917 the decided change of public opinion in favor of the all-season type was marked, having advanced to 4 per cent.

In 1918 it advanced to 7 per cent. It reached 10 per cent in 1919 and 18 per cent in 1920. In 1921 a quarter of the production of passenger cars of all price classes was of the closed type.

Figures seem to indicate that closed types even now in the high priced cars are almost on an equal footing with the open types in popularity. In the $2000 to $3000 class the production of closed types in 1921 was 36 per cent of the whole; $3000 to $4000 class, 41 per cent, and cars of $4000 and over, 47 per cent.

In cars costing $1000 and less, closed car types increased from 1.4 per cent of production in 1915 to 21 per cent in 1921 and approximately 25 per cent this year. These figures show positively the trend of public opinion.

The change now going on in favor of closed types is of greatest importance to the industry, as sales figures show. Up to now the automobile business has been more or less seasonable in character. In the late summer and fall and winter, open car production has been at its worst. But figures on closed cars show that for ten years, dividing the year into quarters, there has been very little variation in quarters—not more than 10 per cent.

In other words, the closed car program means comparatively constant production for the automobile factories of the country. It means, too, better conditions in all factories of the country.

The public viewpoint on the closed model has changed. No one would tolerate for a minute a temporary top on a Pullman train, and very little of the luxury of our modern Pullmans would be possible with such a top. The comparison is not as ridiculous as it may seem. The automobile of today travels as far and as fast, if you like, as the ordinary Pullman, and to the man who cannot afford the luxury of two cars, the closed type offers the widest range of service, the greatest degree of luxurious comfort, and the most convenience for every business or social or recreational purpose.

In the old days the closed car was looked upon simply as a winter car, because of the protection it gave against snow and cold. Today, however, the comfort which the closed car affords, the growing appreciation of its desirability as a protection against dust, dirt, wind and rain as well as snow and cold, has made it the ideal car for every motoring purpose.

Seventy-five per cent of all the cars in use are owned north of the Mason and Dixon line, a country marked by inclement weather and subject to sudden and violent changes on an average of 12 to 14 days a month, with sunshine less than 60 per cent of the year, according to Government estimates.

This climatic condition constitutes a vital reason for the popularity of the closed type, but its strongest appeal today is that it sacrifices none of the really worthwhile advantages of the open car.

Latest On Lincoln Sales Plan

Late news is that the Lincoln car now will be classed as a Ford product subject to sale by all Ford dealers. Lincoln contracts, as formerly effective, will be superseded by regular Ford contracts. By these, all who formerly handled Lincoln cars exclusively will be expected to handle other Ford products, including the car, truck and tractor. Provision will be made in the contracts, it is understood, for handling of Lincoln sales in the larger cities on a wholesale basis by the present distributors.

The realignment of the sales end of Lincoln, rumor says, indicates a very aggressive policy, and even that Ford has completed plans to manufacture the car on a large scale, largely by using several of the other Ford plants in making Lincoln parts.

Receiver for Harroun Motors Named

On petition of creditors, Federal Judge Tuttle, Detroit, on June 22 appointed Guaranty Trust Co. receiver for Harroun Motors Corp., Wayne, Mich. Assets are said to be about $1,000,000, though the corporation claims assets of $2,000,000. Estimated liabilities vary from $750,000 to $2,500,000.

John Guy Monaghan is president, succeeding Ray Harroun, founder and first president of the corporation, which was started just before the world war. It did not prosper at first, but soon after war was declared the plant was taken over by the ordnance department of the army and used in making shells.

To Manufacture Trask-Detroit Steamer

Manufacture of the Trask-Detroit steamer has been started in the plant of Schlieder Mfg. Co., Detroit, manufacturer of valves. O. C. Trask, president of Detroit Steam Motor Corp., is in charge of manufacturing at the plant. The car has 115 inch wheelbase and weighs 2000 pounds. The 2 cylinder engine is directly connected with the rear axle. Control is by throttle on the steering post. A distributor organization is being developed.

On June 6 Henry Ford's neighbors in Dearborn, Mich., urged him to run for the country's presidency. He responded that if the country wants him it will have to go and get him; that he will not spend a cent for a campaign.

Jimmie Murphy Wins Again

Easily First at Uniontown—Milton's Wheel Drops Off—Eleven Start and Five Finish Race

JIMMIE MURPHY and his Los Angeles-made Murphy Special won the 225 mile race on the board track at Uniontown, Pa., June 17, in 2:12:15.13, averaging 102.08 miles per hour. Previous track record average, 99.8, was by Fetterman, Duesenberg, September 5, 1921. Murphy did 109 per in qualifying, and one of his laps in the race at 108.

Ralph Mulford, Frontenac, finished second in 2:14:15.17; Jerry Wanderlich, Duesenberg, third, 2:14:44.23; I. P. ("Red) Fetterman, Duesenberg, fourth, 2:15:55.23; Ora Haibe, Frontenac, fifth, was flagged in his 193d lap.

There were 11 starters. Five finished in the money, and those who did not were Tommy Milton, Leach Special; Harry Hartz, Duesenberg; Frank Elliott, Leach Special; Leon Duray, Frontenac; Jack Curtner, Fronty Ford; G. Glenn Howard, Fronty Ford.

THEY FINISHED 1-2-3 AT UNIONTOWN.

JIMMIE MURPHY, MURPHY SPECIAL.

RALPH MULFORD, FRONTENAC.

JERRY WANDERLICH, DUESENBERG.

Milton, leading at about 104 per, and looking like a probable winner, dropped the rear right wheel in his 73d lap. It shot across the track and hit the grandstand. The car almost overturned, then went through the infield rail backwards. Neither Milton nor George Steele, his sidekick, were hurt.

Murphy and Milton started almost even, Murphy at the pole and ahead. After 47 laps of pretty racing, Murphy went to pit for his first tire change. Then Hartz chased Milton, whose wheel ran amuck, and Hartz thus was leading, half a lap ahead of Murphy. Hartz wabbled a bit once, seemingly about to hit the rail, but kept on. He burned out a tire by the 114th lap. Then Murphy led throughout, though he had a tire change at 150 laps. He then was nearly 3 laps to the good. Mulford was third, Fetterman fourth. The others were out or "not in it." Generally speaking, this is how the boys behaved:

Hartz repeatedly got close to Milton, but always Murphy was in the way. In his 65th lap Hartz was out—oil line.

Mulford took third position when Elliott paused for two tires in his 94th lap, and second when Hartz paused for one in his 114th. Ralph paused for one himself in his 116th lap.

Wanderlich "just stuck around," and landed fairly well, thank you.

Elliott did some good work, but something was wrong besides tires, two of which needed replacing in his 94th. He was out in his 101st.

"Red" Fetterman was fourth when the order ahead was Murphy, Hartz, Mulford and Murphy, at 110 laps. At 122, "Red" battled Hartz for second, but Harry was 3 laps behind Murphy and felt he couldn't spare the place.

Duray, Frontenac, had covered 76 laps when the leaders were at 88, and quit; engine trouble.

Curtner's car had to be taken to pit in his 24th lap. Neither his nor Howard's Fronty Ford did much. Howard was last to qualify, and barely did. He quit before Curtner.

Murphy had lapped all except Milton, Hartz and Elliott at 21 laps. The first 12 miles he averaged 93.8; 40 miles, 104½; at 150 laps he changed a tire; at 165 was averaging 102½.

The prizes were $5000, $2500, $1500, $1000, $900; total, $10,400. The Universal Trophy cup, worth $3000, Milton needed to win only once more, the third time. He still has that chance, next year. His accident was at the same spot as the one he had in 1919.

Murphy is the only winner on record, of the premier American and European events, the Indianapolis and Grand Prix races.

Uniontown is about 50 miles south of Pittsburgh, near the West Virginia line, not on any main railway. Its population is about 20,000. More than that many were expected at this, its seventh annual meet. Not 10,000 attended, and their only cheer was when Milton was unhurt. The race was not a thriller, on the whole. Some rain dropped.

Fetterman and Wanderlich went through nonstop.

A hole in the track developed. Nobody dropped in.

Dunlop's Air-Tube Predecessor

J. B. Dunlop, Dublin physician, who died late last year and who in 1888 replaced the metal rims on his son's tricycle with rims of American elm, and fastened on each a rubber tube, covered with cloth and both encased in an outer rubber casing with cloth flaps which wrapped around the rims, and all of which wraps Dr. Dunlop's memory around the hearts of motorists, nevertheless did not conceive the air-filled tube. In 1845 a man named Thompson patented the air-filled tube idea. His invention never was applied practically, and Dunlop did not know of him. In 1822 Thomas Skidmore, New York, invented the first rubber tubes. Much talk was caused.

A Case of Double Bereavement

"I'm sorry I ran over your hen," said the kind-hearted motorist. "I'll pay you for her."

"That was a pet hen, sir. She always came to me when I called her and laid an egg every day."

"Would a dollar be all right?"

"You'd better make it two, sir. I also have a rooster. He thinks a lot of that hen and when he finds out she's dead it wouldn't surprise me if the shock killed him."—Birmingham Age-Herald.

Anybody Here Ever Seen Her?

Hi diddle diddle,
She drives in the middle,
The street's as wide as the moon;
The traffic cops hoots,
The car behind toots,
If she'd pull to the right we'd all swoon.
—California Farmer.

Better Than Some Driving, Maybe

Among the facts about radio impulses, discussed by the American Institute of Electrical Engineers in Chicago late in April, was the one that such impulses can control and pilot driverless motor cars.

Form New "National" Body

Move Against American Automobile Association Assumes Organized Shape and Statements Fly

THE American Automobile Association was organized in Chicago in 1902. Twenty years later, on June 19, 1922, the National Motorists' Association was formed in Chicago by several hundred motorists, following the walkout of a number of delegates from the annual convention of the former body, held in St. Louis, May 19-20. The two sides of the controversy were stated in Motor West, June 15.

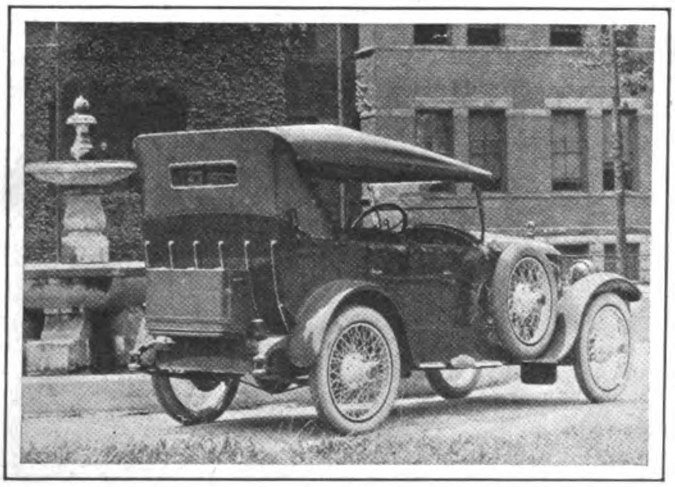
The new body elected Judge Walter D. Means, of Cleveland, president; Richard H. Lee, of Chicago, vice president; H. M. Lucius, of Baltimore, treasurer. A banquet was held at Congress Hotel, statements were given newspapers and press associations, and events will show whether the national motorists' governing power shall be symbolized by the initials A. A. A. or the new ones, N. M. A.

Illinois State Automobile Association, Ohio State Automobile Association, and Hoosier State Automobile Association leaders apparently made the moves which shaped the general result, at the Chicago organizing convention. President George H. Bird, of the Illinois association, stated afterward that "115 of the 200" A. A. A. delegates to the St. Louis convention of the A. A. A. formed the nucleus of the representatives who organized the N. M. A. The official A. A. A. organ, American Motorist, reporting the St. Louis convention, says there was an authorized representation of 360 delegates, of whom 231 were present; and a later A. A. A. statement says "the utmost strength the bolters registered upon the convention floor was 89 delegates."

Statements aside from figures, made by the two sides, also continue to fail to meet squarely. Each, however, accuses the other of commercialism, and asserts its own good intentions. That there is some color to the theory that insurance men are behind both forces, pulling the strings, is indicated by the following:

As told in Motor West, June 15, the "insurgents" charged that President Hayes of the Chicago Motor Club, an insurance man, was getting the A. A. A. to disregard state association rights and feelings, for his commercial benefit; and a later statement by President Bird of the Illinois association says Mr. Hayes uses the Chicago Motor Club as a one-man affair, and as a "camouflage for an insurance business operated by him and from which he personally, as attorney-in-fact, receives 30 per cent of insurance premiums amounting to about $1,000,000 a year."

On the other hand a statement issued by the A. A. A. says "powerful insurance companies which failed, with the aid of a few disgruntled office seekers, to obtain control of the American Automobile Association at St. Louis, were largely responsible for the withdrawal of a few delegates and the attempted formation of a new organization. This contention was borne out by an editorial in the National Underwriter, the leading insurance magazine, which gives credit to the following insurance agents: J. A. Giberson, Alton, Ill.; B. Haywood Hagerman and Frank Furgason, Kansas City, Mo.; Edward A. Winter, Cincinnatti; and Percival F. Knowlton, Ashtabula, O., for the break which led Illinois, Ohio and Indiana state associations, with a few scattering clubs, to withdraw from the A. A. A. meeting."



CREDIT FOR NEW POPULAR TYPE DUE ANDERSON.

"Is the present 4 passenger sport car the forerunner of a more popular type that is destined largely to supplant the present standard touring car or phaeton? There are some indications that it is," says Automobile Topics, which in a long article also says: "There always has been a feeling that a lighter, trimmer car would better satisfy the requirements of average use." It goes on, saying growth of the sport car has been greatest within the past year; that the climax was reached when Buick and Studebaker recently gave "official recognition to the popular demand" by adding such models; and naming various companies which have added such models. Not mentioned was the Anderson Motor Co., Rock Hill, S. C., which claims to have originated the type, in its 4 passenger Ultra Sport, announced in July, 1921. The picture shows wire wheels, which are optional, disc wheels (including two spares), cord tires, aluminum steps, portable trunk in rear, etc., being standard. The finish is Italian red, moleskin gray or celestial blue. The body is built in the exceptionally complete body shop of the Anderson Co., which says, as to the popularity of the new type: "It has ever been the province of the smaller companies to set the styles in cars, and to lead the rest of the industry in that respect."

Not an Automobile Record

The Southern Pacific, in its monthly magazine for employes, names 987 foremen who went through the year 1921 without a casualty reportable to the Interstate Commerce Commission, affecting any employe under their supervision. Every casualty necessitating an absence exceeding 3 days from work must be reported by the company to the Commission. The list included section, shop, store, bridge and building foremen, etc. The list also gives the names of 502 firemen who had a clear record for both 1921 and 1920.

Most of 'Em Never Come Back

Ten thousand cars stolen in one year in New York state —one of every 75 cars registered. That is said to be a fair national average, and it is said 56 per cent of all cars stolen are recovered. How many of the 46 per cent not recovered are "stolen" or otherwise made to disappear with the knowledge of their owners, who value the insurance more—and who thus make honest men's insurance cost more—is, in Teutonic talk, something different again.

6000 Municipal Motor Vehicles

A survey made by the New York State Bureau of Municipal Information shows that in 1921 more than 6000 motor vehicles were owned and operated by 60 out of the 100 largest cities in the United States. Fire apparatus and privately owned cars of which the city pays operating expenses are excluded from the total.

Horse Thieves "Motorizing" Their Business

The Horse Thief Detecting Society of Mamakating, Wallkill and Crawford, N. Y., has been abandoned. The 21 members of the society voted to split $1400 which remained unexpended because there are no horse thieves left to catch. They are stealing automobiles now.

How Cigarettes Start Forest Fires

A Northern Minnesota forest ranger dropped 20 lighted cigarettes along a mile of trail, to find out something. On returning he found 19 of the 20 had started small fires; but it is a peat country, and peat kindles easily when dry. It might have been a costly and dangerous bit of research.

Gasoline production in the United States last year averaged 14,119,313 gallons a day.

Facts About Air-Cooled Fox

Strong Claims Made for Philadelphia Car by a Company Composed of 3100 Motor Car Owners

THAT more than 3100 motor car owners are the stockholders in a company claiming its car, which is air cooled, is equal to high grade water cooled cars in performance and appearance, is interesting. Its "classy" catalog, bearing the inscription "The Finest Car in the World," contains a full page picture of a splendidly daylighted factory which, with the site, is stated to be clear of all mortgages and has the most modern automobile-making machinery. Three models are produced—a 3 passenger coupe ($4900), a 5 passenger sedan ($4900) and a 5 passenger touring ($3900). The latter is illustrated on this page.

The Fox car was formally presented during last winter's national shows, as "a combination of the good features of both air cooled and water cooled cars, scientifically worked into a beautiful, powerful and economical automobile." More than $250,000 was spent in developing it before a single car was offered for sale.

Production was begun recently, and the volume of business booked to a recent date is said to total approximately $2,000,000. A number of agency contracts had been closed at the shows.

Late news is that deliveries are promised in July; the factory now in orderly shape; and additional machinery, being installed.

The Fox is said to run smoothly on high at 5 miles an hour, to accelerate from 10 to 40 on high in 12½ seconds, and to glide to 60 "before you realize it." It is claimed no other air cooled car will do this, and that Fox performances would be remarkable for even the best makes of water cooled cars. With the Fox car very steep hills are taken on high without rushing at the bottom. In one test it started at 10 miles per hour and was going at 30 at the hilltop. Another make of air cooled car rushed at the bottom at 40 per and had slowed to 11 at the top. The Fox motor develops 52 horsepower. Its 6 cylinder motor has 3¼x5 inch bore and stroke.

In a test, using a Zenith carburetor, the Fox averaged 20.2 miles per gallon of gas under good road and traffic conditions. In regular use, 18 to 20 miles per gallon of gas is claimed, 800 miles per gallon of oil, and 10,000 miles per set of tires. For a care of 132 inch wheelbase, and weighing little less than 3000 pounds, such facts are remarkable.

The essential point about Fox air cooling is that the suction fan is at the front, not in rear of the engine as in other air cooled cars, and the air is distributed for maximum cooling. The reason for front entry of air is that it is cooler thus; that a fan at the rear, handling air already expanded by heat, must handle more air than a fan at the front, to produce equal cooling. Also, it is stated the area of the Fox exhaust system, including valves, exceeds that of most air cooled cars more than 60 per cent. This minimizes heating. The intake valves also being very large admit large charges, which means power.

The Fox car was invented by Ansley H. Fox, internationally known as the inventor of the Fox shotgun, declared to be the best in the world and which was used by Roosevelt on his African and South American trips. Mr. Fox owned one of the first 100 air cooled cars made in this country, and worked 17 years to develop his idea.

Big Figures by House of Dominick

Every prominent bank and financial house issues more or less oracular statements, these days. What they say of the automotive industry interests not only the industry but financial men generally. Thus, if what is said be favorable, it helps the business.

One of the oracles is the firm of Dominick & Dominick, New York, from whom come large figures following a survey, to this effect: This year probably 1,800,000 motor vehicles will be made. Capital invested in production of cars, trucks, parts and accessories totals $2,126,000,000—nearly double the capitalization of all the national banks in the country. The 1921 registration of motor vehicles was 10,448,632, a gain of 20 per cent over 1920. Motor vehicles throughout the world number 12,588,949. In round numbers the figures are not new, but it is well that they are printed now and then.

It's a Market of Quick Buyers

According to R. H. Collins, president and general manager of Peerless Motor Car Co., Cleveland, an analysis of the present automobile market, based on distributors' reports, shows its most interesting characteristic is that it is a quick-buying market. Many sales are made to folks who "just drop in," and with whom a merchant's salesman had not had previous contact.

Mr. Collins says the best explanation is in the fact that many motorists, after having decided to drive their old cars a year longer, are suddenly seized with desire for new models, and he says this feeling is sweeping the country. The desire is quickened, he says, by having taken the old bus to the repairman and being shown how much adjusting, tuning up, and so on, it needs.

"And this attitude of the buyers is by no means an undesirable one. In the first place, it reveals a degree of economic confidence on the part of the public which is needed more than anything else while we are recovering from the depressing conditions incident to the aftermath of war.

"In the second place, and equally important, it demonstrates beyond contradiction that the people have come to rightfully recognize the motor car as an essential factor in the conduct of their affairs, no matter where their individual walks in life may lead them. It has come to be an accepted fact that no matter what one's occupation may be, the automobile is adaptable to advantageous use."

No Auto Motive; Just Horse Tale

An English tourist was on a visit to Arran and decided to have a day's fishing. He made inquiries of local experts, and on being told that the cleg, or horsefly, would suit his purpose for lure, he sought the Highland servant girl at his inn.

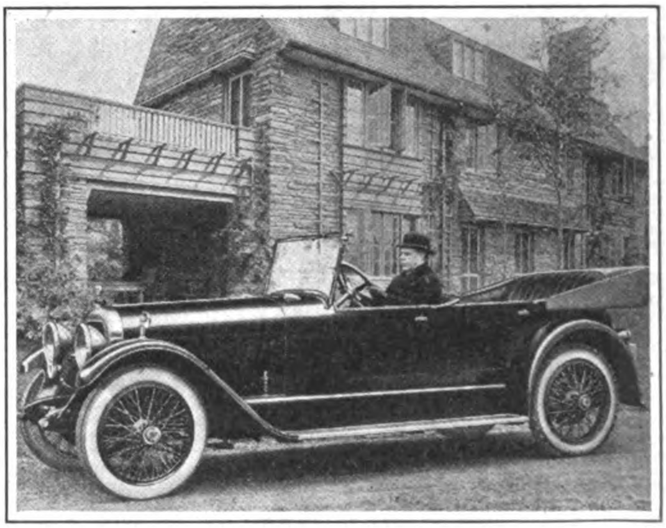
"I say, my girl, can you get me some horseflies?" he asked.

The girl looked at him stupidly.

He repeated his question and added:

"Why, girl, did you never see a horsefly?"

"Na, sir," replied the girl, shaking her head, "but wance I saw a coo jump over a cliff."—Chicago Daily News.



FOX AIR COOLED TOURING CAR, DRIVEN BY ITS INVENTOR.

IN FOREIGN FIELDS

Holland Dislikes German Cars

Consul General Anderson, Rotterdam, states that in spite of the increased imports of automotive products from Germany in the first quarter of 1922, compared to the same period in 1921, automobile agents in Holland generally indicate that German cars are not popular. Germany supplied 388 of the 652 passenger cars, valued at $807,092, imported during the first quarter of 1922, as compared to the 148 furnished by the United States. Of the 302 trucks imported, valued at $230,010, Germany supplied 289, France 9, and other countries 4. However, the United States supplied 100 of the 145 truck chassis imported, as compared to 30 supplied by Germany. The large imports from Germany may be accounted for by contracts made last year, which Germany has not been able to fill until the past few months.

Mexico Encourages Motor Transport

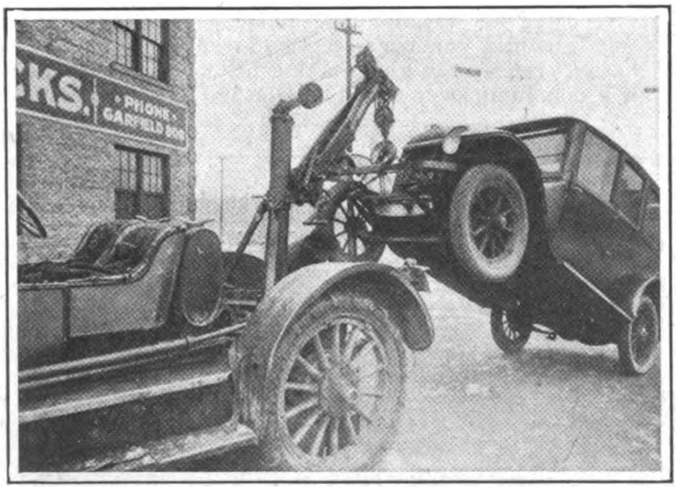
"The business man in Mexico, as in the United States, has come to feel that the automobile is a necessity." This statement by the official organ of the American Chamber of Commerce in Mexico City appears to be in line with the policy of the Mexican government.

This appreciation of the car's utility is emphasized by the suspension, through presidential decree, of import duties, despite the general need for revenue. Similarly, governors in certain provinces have urged that motor vehicle taxes be kept low.

Even in matters of organizing of automobile shows and fostering of highway projects, official interest has been taken. As result, several shows have been held in Mexico City already and a national highway is proposed to traverse the entire country.

Australia Has 79,000 Cars

It is estimated there are in use in Australia about 79,500 passenger cars and 5400 motor trucks, according to a report by Consul Palch, Adelaide. These are divided among the provinces as follows: South Australia, 11,000 passenger cars and 350 trucks; Western Australia, 3200 passenger cars and 130 trucks; Tasmania, 2800 passenger cars and 120 trucks; Victoria, 22,000 passenger cars and 400 trucks; New South Wales, 32,000 passenger cars and 3900 trucks; Queensland, 8500 passenger cars and 500 trucks. It is also estimated that there are about 35,000 motorcycles in all. Most of the passenger cars are of American make.



DERRICK FOR TOWING DAMAGED AUTOMOBILES.

A new derrick invented by Albert Gloor, of Chicago, is designed for automobile repair trucks used for towing damaged cars to garages. The derrick has a boom which can be swung in a complete circle. This boom also can be lowered to be aligned with the pull of the cable when the device is used to pull cars out of ditches, or to pull the car upon which the device is fixed. It has an annular locking clamp for locking the base of the boom in any desired relation to the standard on which it is mounted pivotally. The boom is pivoted sufficiently far up on the standard so as to clear the tops of the usual side tool boxes on a repair truck. It has an efficient arrangement of cables and drums by which great power can be applied to the sheave carried by the boom.

English Quarrel Affects Prices

An April survey of the British automotive industry by the American Trade Commissioner's office in London showed that it is still affected adversely by the engineering dispute. A few firms have abandoned the lockout rather than lose such temporary seasonal business as awaits them, but this is far from being the general action of the motor car manufacturers.

The temporary pressure from the home trade still continues. Overseas markets have not opened out in any direction. The shortage of production has caused a boom in the price of post-war second-hand cars, and it is believed prices soon will approach those in effect for second-hand vehicles after the armistice in 1918.

German Automotive Exports Decrease

Exports of automotive products from Germany decreased nearly 40 per cent, as compared with exports, during January, 684 passenger cars, motor trucks and chassis having been exported, according to unofficial reports received by the automotive division of the Department of Commerce. The total exports of cars and chassis for the first two months of 1922 amounted to 1775. The Netherlands imported 30 per cent, Belgium 14 per cent, Spain 8 per cent, Switzerland 4 per cent, Denmark 4 per cent, Sweden 4 per cent, France 2 per cent, Great Britain 2 per cent, Austria 2 per cent. The remainder was taken by various other countries in lesser volume.

Snow Motor Car Tested in Norway

An engineer of Cjovik has just completed satisfactory trials with his new car constructed for running on snow, says Consul General Snyder, Christiania, in a report to the automotive division of the Department of Commerce. The driver occupies the rear seat, with the engine between him and the passenger in the front seat. The car is intended to haul a sled with additional passengers. The car is one meter wide, with a wheel track of .80 meter for use in country lanes, and the front skate-gliders are replaced by wheels for summer use. The engine is a specially designed air cooled type, and all who have tested the car are greatly satisfied with it.

Road Construction Around Amoy

Considerable progress was made during the past year in road construction in the Amoy district, China. Although the roads are not of the best they will lessen the time of traveling from 6 to 6 hours to about 2 and 3. There are more than 30 motor cars going out of the several roads from Changahow daily. The new road from Auhai to Chuanchowfu has eliminated the necessity of traveling by sea, says Consul Carleton, Amoy.

Italian 1921 Exports of Motor Cars

The Italian motor industry, with a producing capacity of 33,600 cars per year, exported 9586 cars during the first nine months of 1921 as compared with 7977 cars for the same period of 1920, says Assistant Commercial Attache A. A. Osborne, Rome, in a letter to Bureau of Foreign and Domestic Commerce.

Our Reimports of American Cars

During the past three years, 625 American cars and trucks, valued at $1,159,031, were reimported from France and 1801, valued at $2,819,633, were reimported from Great Britain. No information is available as to the proportion of military supplies sent to Europe by this country involved in these figures.

Nash Uses Cream Separators

Facts on Oil Reclamation and Other Motor Test Department Ideas That Cut List Price

THE cream separator, heretofore confined to the placid routine of farm life, has been put to work amid the hum and roar of automobile machinery, by Nash Motors Co., Kenosha, Wis. Thousands of dollars are saved each year in the motor test department by the reclamation of oil through cream separators.

Oil for reclamation is placed in a large reservoir. From there it is piped into two 150 gallon tanks just above a special centrifugal cream separator. In the overhead tanks the oil is heated by steam to a proper temperature, after which it settles eight hours. The fluid is then run through the cream separator, the centrifugal action of which removes practically all remaining foreign matter from the lubricant, and the reclaimed oil is very high in quality.

Reclamation of oil is but one phase of manufacturing efficiency in the Nash motor test department, where one motor "breaks in" another; city illuminating gas, in place of gasoline, being used as fuel. The oldtime dynamometer method was too slow and not sufficiently efficient. Now in the test department one sees two parallel rows of motors 35 in a row. Such economical manufacturing efficiency naturally helps make possible the low list price of Nash cars.

In starting the test the "live" motor is kept in reverse and its brother engine, in low speed, is limbered up a bit; then the "green" motor is put in second speed and finally thrown into high. After it has become thoroughly limber, the "green" motor, on its own power, is made to hum and whirr under the watchful eye and trained ear of an inspector who meanwhile is scrutinizing and "listening in" on a number of motors in that section of the line allotted to him.

During the test, should the "green" motor show by the slightest indication that something is amiss, the inspector immediately throws out the clutch and examination is made. When the test is completed the motors are sent into the "silent room." There they are run with gasoline as fuel, so that before being sent to the chassis assembly department there may be no possibility of anything wrong.

To make doubly sure that the motor is 100 per cent perfect after being assembled in the completed car, it is given a rigid road test on the company's testing track. This means a positive check on the motor so that its operation, in conjunction with all moving parts of the finished product, may be observed. If it performs to the entire satisfaction of the expert mechanician at the wheel it is tagged for shipment.

A Questionnaire for Motorists

Thomas A. Edison's now famous questionnaire caused a real sensation in practically every part of the country. It caused others to send out questionnaires, some serious, other in a lighter vein. George H. Kublin, chief engineer of Moon Motor Car Co., St. Louis, prepared a list of questions for motorists, with the comment: "If you are the owner of a motor car and cannot answer the questions, it will pay you to get the information, as in all probability, knowing the answers will save you a great deal of annoyance, time and money." The questions follow:

Do you know the number of points of lubrication on your car? at least three reasons for overheating of engine? gas and oil consumption per mile? road speed in miles per hour at which engine will perform most efficiently and economically? firing order of cylinders? on average road, driving at a speed of 25 miles per hour, what distance is required to bring your car to a dead stop? driving in high speed on a level road, what is the lapse of time in seconds to accelerate from 5 to 25 miles per hour? how many gallons of water are required to fill the cooling system? what is the purpose of the various speeds of a transmission? what is the correct grade of lubricating oil you should use for your car?

Colorado's Tourist Getting Decalogue

With the hope of establishing better co-ordination between free travel information agencies, municipalities, and chambers of commerce throughout the United States, the tourist bureau of the Denver Civic and Commercial Association has suggested the following as the ten commandments of travel:

1. An exchange of scenic, industrial and agricultural literature through tourist information racks means greater returns in travel sales for all communities.

2. The automobile camp is another clearing house for the local distribution of tourist dollars to business interests.

3. Don't worry about the tourist "crop"; it has no failures and should be given equal consideration with other harvests.

4. Consult your hotel and restaurant men as to how they can improve their service; it may be good now, but try to make it better.

5. A tourist's sense of appreciation is as keen riding in a flivver as in a railroad observation car, so clean up and paint your town.

6. Dedicate an All-States Avenue in the camp grounds, and show civic appreciation of tourists' presence in an All-States Day celebration for tourists in the height of the season.

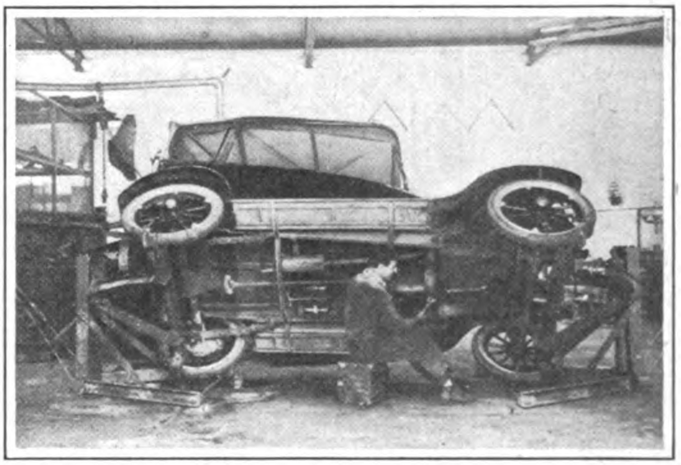
7. Appoint committees to greet tourists and to hand them literature pertaining to your district and regarding side trips.

8. Encourage an exchange of campfire tales of adventure and see that tourists are supplied with church and amusement directories.

9. Promote a standardization of camp facilities and regulate services rendered.

10. Remember that the tourist of today is the citizen of tomorrow.

Lem Loosehead says: Does anybody know a painless pizen fer a fella thet's always tellin' me how to run every little detail o' my home 'n' bizness?



NOVEL CAR-TURNING DEVICE MADE OF ANGLE IRON.

The invention shown, made of pieces of angle iron bolted together, and apparently of great value especially to repair and service departments and garages, has been perfected by A. Jakovleff of San Francisco. Pressing one finger on a lever swings a car on a longitudinal axis so that transmission and other chassis parts can be repaired from a standing position. The center of gravity always prevents the car tipping over, and it can be brought to vertical position, from side to side, without danger of accident. The idea comprises two devices, one for the front wheels and one for the rear ones. Each device contains a jack, used in raising the car so it can be turned over. The devices are very strong, yet one man can handle them. They have iron wheels, so can be moved around, and when not in use take up very little space. The cost is so slight the idea is available for car owners as well as trade men.

Highway Matters

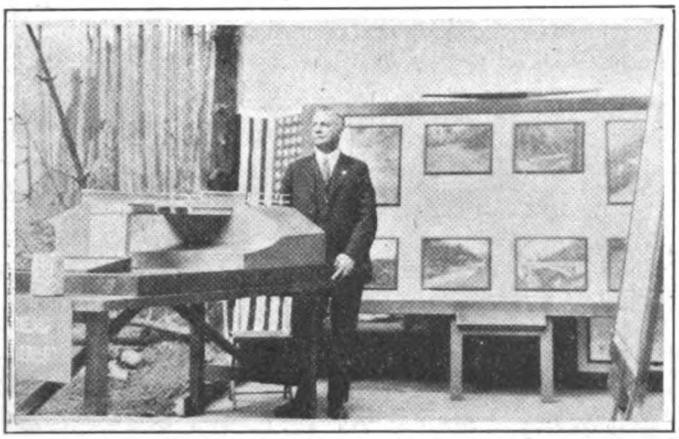
Latest Guess—Sub-Base

AT a dinner in New York, given by the highway committee of the National Automobile Chamber of Commerce, one talk was on Things that Are Not So. It was by Thomas H. MacDonald, chief of the U. S. Bureau of Public Roads. One thing that he said is not so is the claim that it is wrong to build a road that will not last longer than the bond. That might be illustrated thus: If even 6 per cent is paid, even as long as 30 years, on a $10,000,000 issue of bonds, none being retired meantime, the interest alone will total $18,000,000, or $8,000,000 more than the sum borrowed; but if the $10,000,000 invested in highways pays 50 per cent per annum, as is said to be true in California, even if they are completely wrecked in 10 years, which is not true, the profit in that period is $50,000,000, which easily will stand comparison with the investment, interest and maintenance cost.

Mr. MacDonald laughed the case of California critics of California's cement concrete highway system out of court. He cited the bureau's survey of 1200 miles of the system in 1920, which had been built since 1909, ten years, in which less than 13 per cent showed distress. A much smaller percentage was broken down. What Mr. MacDonald was getting at was that of the roads which showed distress or were broken down, and which were 4 and 5 inches thick, 75 per cent were on clay and adobe sub-base. He said "very much thicker" roads would have shown similar results if laid on the same sub-base.

In fact Mr. MacDonald, and a number of other eminent highway men, and of course the small fry in consequence, now are much inclined to believe most road deterioration is due to wrong sub-base. Possibly; even probably—perhaps. But Mr. MacDonald said something much more nearly absolutely certain when he said:

"Most of the things we have known about highways are not so. You will find flat contradictions of practically everything we have accepted as trite and academic and almost proverbial."



IN BUREAU OF PUBLIC ROADS' SAN FRANCISCO OFFICE.

If it isn't so, mentioning the fact that state highway officials in the West are saying it is so—that men in Bureau of Public Roads headquarters in Washington, D. C., are becoming arrogant and thus cluttering the world's progress, will serve as a tip, even more so that if it were so. At least the charge probably does not fit Dr. Hewes and other able gentlemen who make their headquarters in the San Francisco office, of which the picture is a glimpse; in fact this is supposed to be about the model section of a reinforced concrete bridge, used for exhibition purposes, shown in the picture. Now look to the left—can you make out the partial view of burned forest, on the wall? It is a striking, huge before-and-after example of what carelessness will do to our woods, the unseen part showing unburned trees. On another wall hang pictures shown by the original photograph to be beautiful scenically and displaying examples of fine bridge and highway work. On which Federal road aid funds have been expended, co-operatively with those of states, all under the Bureau of Public Roads' supervision.

That reads exactly like admissions medical men make in their own meetings and journals. They do not make theirs in newspapers, as Mr. MacDonald did. Yet he is following the same plan medical men do. They switch from one line of profound bunk to another in chasing a disease from pillar to post, tracing it minutely through a maze of physical parts and a very wilderness of awe-inspiring technical terms, and then, for a period, proclaiming the discovery of a "cause", and a new "cure"; always dodging the basic, fundamental factor, which in health matters is general condition; and, in time, finding the "cure" a fallacy, discovering another "cause" and another "cure," and so on.

As to highways, sub-base certainly is a basic factor, but there is another—the material which is put on the sub-base. If it is brittle, inelastic, it will have less "bridging" endurance on poor sub-base, and shorter life on any sub-base, than equally strong material of more toughness and elasticity.

While Mr. MacDonald now is inclined to concentrate on sub-base, California's highway commission repeats that a bituminous, elastic cushion on top of brittle, inelastic cement concrete paving will lengthen its life noticeably and economically. Both acknowledge that something should be put under it or over it, to make it last. Some day, inevitably, both will discover that whatever else is done, it, itself—the cement concrete—is not as good material for investment of the people's money as asphaltic concrete would be. There are several long-worn, still-good-as-new examples of the latter, to prove this, in California, waiting for these eminent gentlemen to discover; thinner roads, at that, than the cement concrete roads which are not standing the gaff.

Forest Road Aid for Colorado

Expenditures totaling $586,000 of national forest highway funds, for 106 miles in Colorado, were approved recently by Secretary of Agriculture Wallace. It is for roads of primary importance to the state, counties or communities within, adjoining or adjacent to national forests.

Eight projects have been approved—7½ miles of the Berthoud Pass road will be completed at a cost of $140,000; $26,000 will be expended to eliminate switchbacks on the Durango-Silverton road and in surfacing poor sections; $100,000 will be expended upon the Red Mountain project, to which the state will build an adjoining section; 12 miles of the Cumbres Pass road through Conejos County will be completed at a cost of $130,000, with the county constructing a co-operative section; a project 5½ miles long, over Cameron Pass, will be built for $71,000; and so on. The Bureau of Public Roads will supervise the construction.

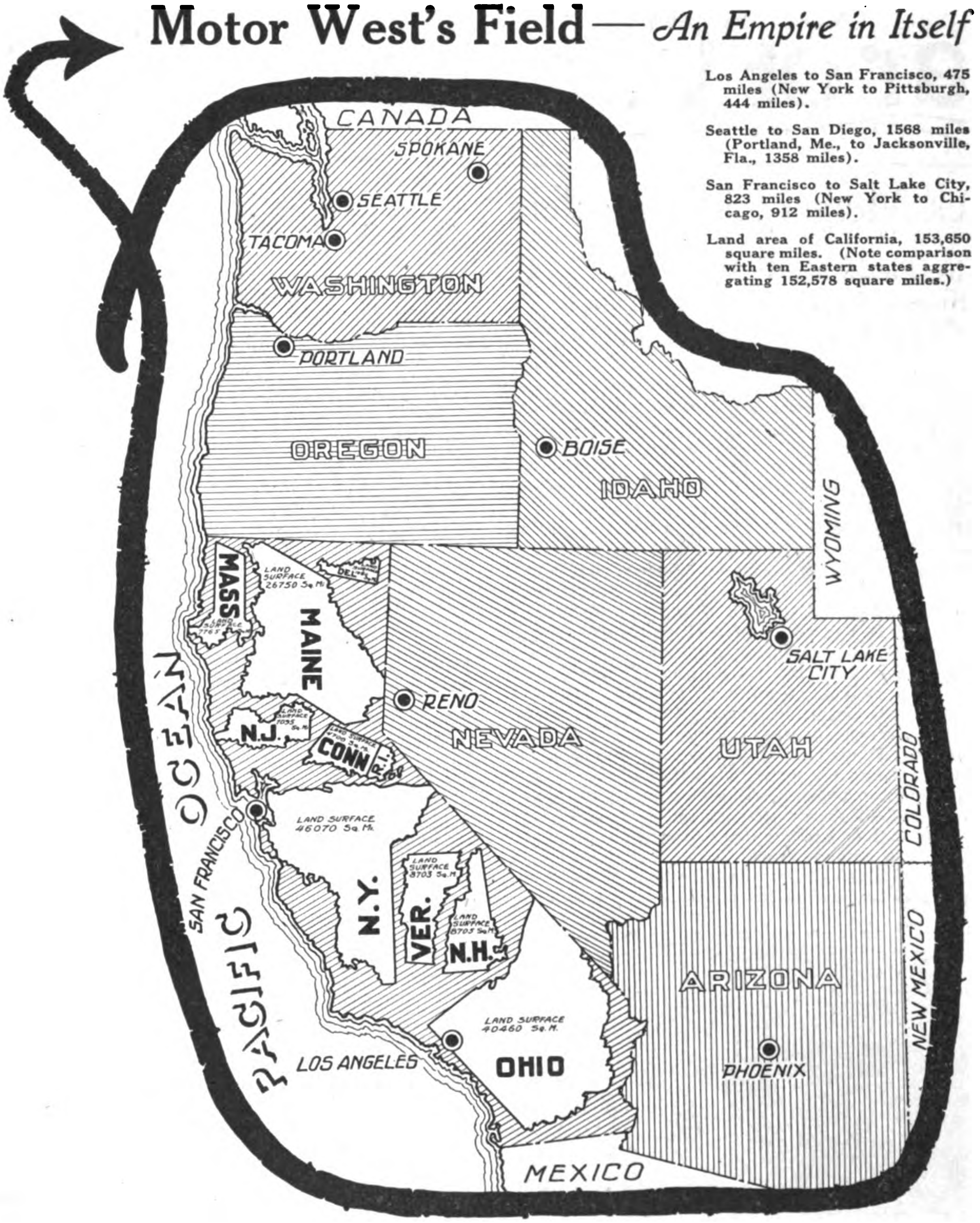
$600,000,000 for Roads in 1921

The United States spent $600,000,000 for roads in 1921, according to estimates of the Bureau of Public Roads. This sum was derived from the following sources: Local road bonds, 33 per cent; county, township, and district taxes, assessments, and appropriations, 14 per cent; state taxes and appropriations, 12 per cent; state road bonds, 7 per cent; motor vehicle license revenues, 19 per cent; Federal aid, 14 per cent; miscellaneous sources, 1 per cent.

Federal Aid Mileage Since 1916

Federal aid roads completed since 1916 totaled 11,017 miles on March 31, an increase of 8016 miles during the preceding 12 months. A great many different types and widths were constructed, the general average cost per mile for the United States being $17,120. In total mileage completed the leading states were Minnesota 1093 miles, Texas 919, Wisconsin 657, Illinois 489, Ohio 465, Arkansas 401.

Motor West's Field—*An Empire in Itself*


CANADA
SPOKANE
SEATTLE
TACOMA
WASHINGTON
PORTLAND
OREGON
BOISE
IDAHO
WYOMING
MASS
LAND SURFACE 26750 Sq. Mi.
DEL.
MAINE
RENO
NEVADA
SALT LAKE CITY
UTAH
N.J.
CONN
R.I.
LAND SURFACE 46070 Sq. Mi.
N.Y.
LAND SURFACE 8703 Sq. M.
VER.
LAND SURFACE 8705 Sq. M.
N.H.
COLORADO
ARIZONA
NEW MEXICO
PHOENIX
LAND SURFACE 40460 Sq. M.
OHIO
LOS ANGELES
SAN FRANCISCO
PACIFIC OCEAN
MEXICO

Los Angeles to San Francisco, 475 miles (New York to Pittsburgh, 444 miles).

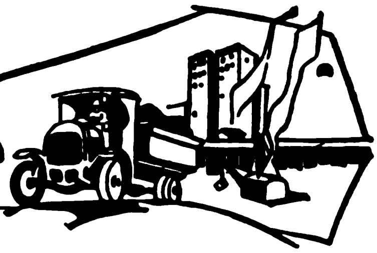
Seattle to San Diego, 1568 miles (Portland, Me., to Jacksonville, Fla., 1358 miles).

San Francisco to Salt Lake City, 823 miles (New York to Chicago, 912 miles).

Land area of California, 153,650 square miles. (Note comparison with ten Eastern states aggregating 152,578 square miles.)

Motor West's field takes one-sixth of the product of the automobile and accessory factories of the United States. On the other hand it produces the great bulk of some of the foods and other commodities consumed by the rest of the country. In industrial production, note its ten-year increase in number of factories—86 per cent; in factory hands—97 per cent; in annual factory production—187 per cent. What Eastern plants do not adequately supply it, it soon will supply itself. Its raw materials, such as cotton, hides, etc., are as near to its manufacturing centers as those in the East are to factories there. Climate favors it, too—the Mare Island navy yard near San Francisco produces 25 per cent more than other navy yards, for the same labor cost. Living conditions are ideal, unemployment less, slums unknown, power is plentiful. The water power resources of 11 Far Western states total 42,850,000 horsepower; of the rest of the country, only 20,640,000. The installed capacity of these 11 Far Western states has only begun—in 1920 it was only 2,515,000 horsepower, of which California supplied 1,228,000; the Pacific Northwest 585,000; Intermountain and Southwest states 702,000; but by 1930 the total installed capacity of the region will be 5,352,000 horsepower. California's plans alone, for the decade, call for expending $500,000,000. To see the region's possibilities, consider that even 100,000 horsepower will run 1300 factories producing $140,000,000 in goods annually, and will serve also for very much more than that in irrigation, transportation and lighting.

The Car of Commerce



Truck Merger Election Held

Lee Tire Head Made President, Selden Officers Are Directors, in New Corporation's Personnel

THE new Industrial Motors Corp., organized recently under the laws of Delaware, with an authorized capital of 1,000,000 shares of no par value, has announced the following list of directors and officers:

Directors—John J. Watson, Jr., who is president Lee Tire & Rubber Corp.; chairman of board, Martin-Parry Corp.; vice president and treasurer, International Agricultural Corp.; Frederick M. Small, president Martin-Parry Corp.; Reeve Schley, vice president Chase National Bank; George C. Gordon, president Selden Truck Corp.; William A. Phillips, New York; George P. Smith, member Smith & Gallatin; Oscar L. Guberman, member of Knauth, Nachod & Kuhne; Henry Hopkins, Jr., member of law firm of Travis, Spence & Hopkins.

Officers—President and chairman of board, John J. Watson, Jr.; vice presidents, George C. Gordon, Robert H. Salmons, Allan R. Cosgrove, James R. Floyd; secretary and treasurer, Henry Hopkins, Jr.

The announced purpose is to acquire and hold the stocks, securities and properties of motor vehicle and accessory manufacturing and selling corporations and to manufacture and sell motor vehicles and accessories. The first two units included in the new corporation, as told in Motor West, are Selden Truck Corp., Rochester, N. Y., and Atlas Truck Corp., York, Pa. Both of these occupy an important and commanding position in the truck industry. Their business, as stated by their officers, has shown steady improvement during the past few months. It is expected that other important units will be acquired rapidly.

Ultimate plans include bringing together the strength and co-operation of some of the principal manufacturers engaged in motor truck construction, thus providing means and methods of effecting economies in the purchasing of raw materials and supplies, lowering the cost of production and markedly increasing efficiency in manufacturing, merchandising and distribution.

The large distributing economies which the plans of the new corporation will make possible are expected to offer advantages in service to truck purchasers, and to increase the dealers' opportunities for better profits through more efficient selling.

TRANSPORT TRUCK CARRIES FOUR TONS OF JOY SNOW. Some folks like Los Angeles so well that they stop at the Ambassador Hotel and have their children attend a school there. Not so long ago, just before the present semi-summery season, when the big hills off yonder still wore white mantles, a 2½ ton Transport truck carried 4 tons of snow from the hills to the school, 90 miles, in less than 5 hours. On the way through towns, dumbfounded citizens were astonished and the populace snow-balled. At the school, the children were given half a day off, and they built a snow man, and native-born youngsters—most of whom never have had a close-up of this mountain product—flocked to see.

Indiana Truck Corp. President Dies

Charles G. Barley, founder and president of Indiana Truck Corp., Marion, Ind., died on June 11, following a minor operation for uremic poisoning. Owing to ill health, he had not been actively in the company's affairs for two years. In his passing the industry loses a pioneer, and a list of his other activities shows he was a leader. He founded and was the largest stockholder in the Marion Ice and Cold Storage Co., director of a bank, a large department store concern, a stove company, table company, loan company, electric company, all of Marion. He was interested in the Logansport Oxygen Co., and president of a land company in Miami. Fla.

Mr. Barley's successor in the Indiana Truck Co., J. W. Stephenson, who was executive vice president and general manager, was Mr. Barley's associate in many enterprises and now is, in some of those named, being president of Delta Electric Co. Before joining Indiana Truck Co. he and Mr. Barley were partners in the Rutenber Motor Co. Mr. Barley, who brought out the Harwood-Barley truck in 1911, was one of the country's five original motor truck producers; and it is notable that toward the end he spent much time in a rolling home, built on a truck chassis, touring the country, trying to regain his health.

After Huge Los Angeles Truck Order

Los Angeles' city hall swarmed with truck makers' representatives, June 21, when nine bids on 107 trucks were opened and referred to the supply committee. The cost, it is said, will be $500,000 to $600,000. The law permits the city to buy, outright, for only one year ahead, so the bids are on "leasing", but payments are to apply on purchase, during three years. The Garford bid is said to be lowest. Other bidders are Moreland, Republic, Service, Commerce, Pierce-Arrow, Mack, International and GMC.

Representing truck owners who now rent to the city, J. L. Ely presented figures, June 16, to show that hiring is cheaper. Each truck and driver receives $375 per month. It is claimed the city cannot operate its own trucks at less than $550.

Republic Truck Output Excellent

Republic Motor Truck Co., Alma, Mich., is operating at 50 per cent of capacity. President F. E. Smith says production is between 450 and 500 trucks monthly. He believes farm buying will start in July.

A Halo For Truck Drivers

Traffic Officer Tells Breezy Meeting Facts Putting a New Light On Blame for Accidents

THERE was a breezy meeting of the Truck Owners' Association of Southern California, June 19, in the club rooms, 513½ South San Pedro St., Los Angeles, and a question put to Sergt. J. A. McCaleb, who has been on the police force 12 years, on "traffic" 9 years, and investigator of traffic cases 7 years, brought the reply that only a small percentage of accidents is blamable upon truck drivers. Either as owners or working for wages, he said, they not only are humane but feel their responsibility for loads which often are valuable.

The reply started considerable comment on the prevailing newspaper attitude toward truck drivers, and on a recent assertion that the drivers on a certain California motor stage line work while practically asleep.

Sergeant McCaleb answered another question, relating to difference in driving in Los Angeles and San Francisco. He said much of the Bay City traffic is centered on Market St., which is much wider than any downtown street in Los Angeles; also, that in Los Angeles many retired business men and farmers drive. The way he told this implied that many of these sometimes do not know exactly where they are "at."

The genial policeman presented a surprising number of relatively small but, taken all in all, important details in which cooperation would ease the traffic situation. The Los Angeles drive against violations is permanent; has done good; accidents now average only 80 daily, instead of 130, he said. He said Secretary Phil Jacobson, of the truck owners' body, and who has saved deserving drivers or their employers from heavy court expenses in many instances, has won his way on merit, at police headquarters.

The association members at the meeting represented at least $5,000,000 invested in motor trucks. President F. L. Allen, general manager of a storage company, presided. J. A. Rominger, state senator, referred to as "our next lieutenant-governor," was eloquent on the wonderful growth of motor transport and hammered hard on the need of organized presentation of subjects to the legislature, which often is forced to act without accurate or consistent assistance from its constituency.

A. D. McLeod, cost system expert, showed how, in 200 books costing 12 cents each, the Los Angeles water department is keeping accurate record of the cost of as many trucks, with very little work.

President Allen, somewhat of an accountant himself, told how he had learned it cost $1 a mile to operate a 5 ton truck, and remarked that no doubt some 5 ton truck owners, lacking such knowledge, are charging only 50 cents a mile.

Roy Compton, advertising manager of International-Mack, spoke of the need of the northern and southern truck men in the state co-operating.

John Totten, insurance man, made it plain that the more care truck operators use, the lower the cost of insurance.

R. Sprague, executive board member, made a humorous report on the state association's recent meeting at The Pines, near Fresno, and on the journey through the primeval, to and from it; and President Allen added facts about what President Galvin, of the national teamsters' body, had told there of the oh, quite Celtic attitude taken toward certain non-co-operatively disposed concerns in the Middle West. Mr. Galvin, it appears, is a two-fisted Irishman, with a brogue as broad as Erin.

Secretary Jacobson reported that appeal to appellate court would be taken in two cases in which a Los Angeles justice has been upheld by superior court. In one, there was a $15 fine for a 1500 pound overload, though the law provides for a penalty of $20 per full ton overload. In the other case the justice had upheld county supervisors who exercised the right provided in the state law, to limit maximum weight, but did so by limiting trailers to one, though the state law says there shall not be more than two, implying there may be more than one.

Mr. Jacobson reported a variety of other matters. Orange County is to form an association immediately. Fullerton's new ordinance, limiting maximum weight to 12,000 pounds, will be fought. A motion picture, showing the value of the motor truck, will be shown throughout the state. A get-together meeting is to be held soon with the Motor Car Dealers' Association of Los Angeles.

The editor of Motor West submitted verbally a publicity plan, stated in another article.

After the talking there was a pleasing mixture of men with each other, and with near-beer, olives, and other caloric and vitamine-bearing refreshment.

GMC Police Trucks in St. Louis

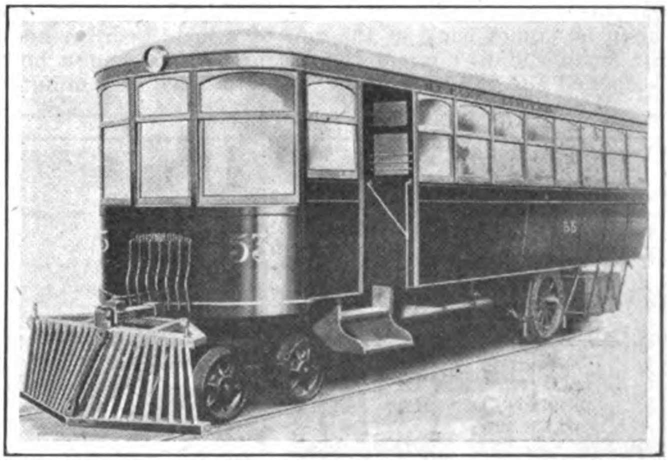
St. Louis, Mo., is using four police patrol trucks, made by General Motors Truck Co., Pontiac, Mich. They are speedy vehicles, of the real hurry-up variety, and are proving their value in making early arrests and removal of criminals to a place of confinement. Intelligent care at stations keeps them at the highest pitch of efficiency.

A great saver of time is a supply truck for the exclusive service of this fleet. It carries gasoline, oil and "dope." If a patrol truck has been making a run to a remote part of the city and needs any of these supplies, the service truck is on its way at a moment's notice, day or night.

Better Days for Oshkosh Company

By unanimous vote of stockholders, an amended plan for refinancing Oshkosh Motor Truck Co., Oshkosh, Wis., is in effect. The sum of $76,000 has been provided, enabling liquidating of much of the indebtedness, and such extension of time on the remainder as will insure the safety of the company.

Rapid growth in the use of motor trucks is indicated by the registration for 1921, which was 1,127,000 or about ten times the number in use in 1914.



DUPLEX COMPANY SEES GREAT RAIL CAR OPPORTUNITY. President H. M. Lee, of Duplex Truck Co., Lansing, Mich., says the automotive rail car pictured here is the result of long, concentrated engineering work, stimulated by the conviction that there is an unlimited market for this type of car; a market made by the fact that many railway extensions, now long overdue, can be built profitably if operation cost can be reduced suitably; and by the needs of interurban traction lines and many municipalities, particularly smaller ones and especially for owl and emergency service. Mr. Lee dwells upon the great difference in initial and operating cost, between ordinary locomotives and trains of one or two coaches, and this rail motor car, for which, for branch railroads having sufficiently large baggage or freight business, a trailer has been designed. This car has the same type of power plant, built for heavy, continuous service, as is used in Duplex motor buses. Power drive is by worm and ring gear. Braking is equal on the four wheels placed at the front end, and the two wheels at the rear. If desired, the car can be operated by one man.

This "Only Goes to Show"

A One Ton Truck Plays Important Part in Remarkable Simplification of Saskatchewan Farm

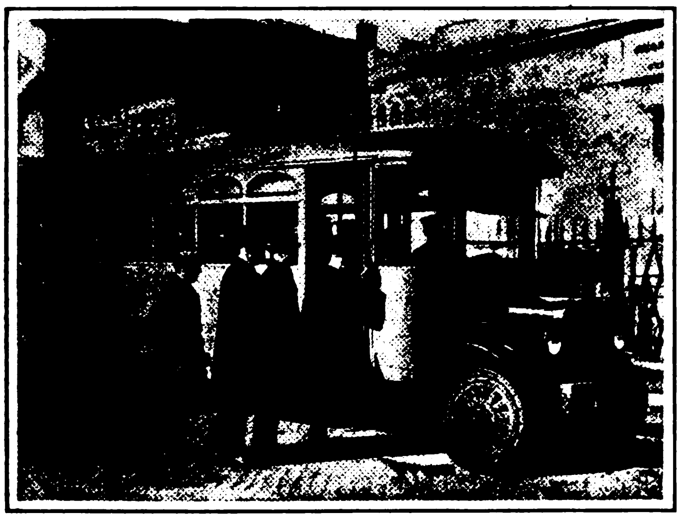
A REPORT of the co-operation supplied by a Chevrolet 1 ton truck in the Canadian wheat fields is in line with the always easily proved statement that the motor vehicle is a real help in almost any kind of business.

L. A. Coupal, who lives near Sedley, Saskatchewan, and has 2560 acres of land under cultivation, has replaced four teams of horses, their wagons and drivers, with his small truck, does all his grain hauling and selling himself, and knows how he stands every time a truckload of grain is delivered. Under the former system of operation with teams, each team averaged two trips a day, 15 miles for the round trip. The truck makes nine round trips daily. The smallest load carried is about 2600 pounds, or 65 bushels, and the largest is about 3060 pounds, or 77 bushels.

While the average load is seen to be well above the rated capacity of the truck, the little Chevrolet has made no complaint, nor has it required any expenditure to speak of for repairs. Mr. Coupal, who is a "bookkeeping farmer," estimates that the cost per bushel of hauling grain in the light truck is 1.7 cents, considerably less than by team. In addition to the advantage of lower bushel cost, the time element has been reduced from 7 or 8 weeks to about a month's steady hauling.

Mr. Coupal owns two tractors and a separator and does all his own threshing, handling and marketing about 15,000 bushels of grain at harvest time. Total mileage in hauling the grain to market was 133, and was covered on 10½ gallons of gasoline, at the rate of 12 2/3 miles to the gallon. The truck required only one pint of oil for the distance traveled.

To expedite loading the truck, Mr. Coupal took one of his old wagons, with a truck body, and mounted an extra truck body on top of that so that the bottom of the upper body was above the top of the Chevrolet's body. The grain spout fills the old wagon body while Mr. Coupal has gone to town with his truckload of grain, and when he comes back, at the end of a little over an hour, the small sliding door at the bottom of the wagon body is opened and the motor truck body is filled in 4 minutes. Mr. Coupal naturally gives the medal to the Chevrolet car for speed, dependability and economy of operation.



REPUBLIC BUS WINS FAVOR IN BALTIMORE TEST.
A Knight-motored Republic bus of 25 passenger capacity, made by Republic Motor Truck Co., Alma, Mich., went through a 5 months test in Baltimore, equivalent to 9 months of normal operation and therefore of unusual severity, so well that it resulted in an order for 26 buses of the same type for the Baltimore Motor Transit Co.

Trucks Open Small Timber Tracts

Logging with motor trucks is most practical where the stand of timber is too small to make profitable the building of logging railroads, and where the stumpage is located in fairly level country along well surfaced highway, according to H. R. Patterson, professor of logging engineering in Oregon Agricultural College, Corvallis, Ore.

"The motor truck and trailer are going to develop into a great conservator of our timber resources in connection with the development of our highway system," says Professor Patterson. "Small tracts of timber can be logged with motor trucks over the highways to a centrally located mill, or a portable mill may be used and the finished product moved with trucks and trailers. Often it is impracticable to develop a small tract of timber with a logging railroad on account of construction expense and the short life of the operation, while the same tract could be developed as a motor operation at a profit.

"The expense of constructing a good motor truck road is only slightly under that of building a railroad grade. The only saving is in the expense of the steel and rolling stock. The engineering features of motor truck operations are similar to those of railroad operations, except that the grade does not need to be more than 10 feet wide. Short radius curves can be used and heavier grades allowed."

Truck Hauls Lubricating Oil Only

A novel oil tank wagon was built by Associated Oil Co. to deliver lubricating oil to service stations in San Francisco. It is thought to be the first tank wagon delivering lubricating oil exclusively.

The oil tanks are divided into six compartments, with a faucet for each, on each side of the truck just back of the cab. By this means oil may be obtained from either side of the truck. Just back of this is a section for carrying cans of grease. Just back of this is a section for carrying four cans of lubricating oil. These cans are used in delivering brands of oil that are not carried in any of the six compartments. Back of these cans is a compartment in which are two brass oil cans of 10 gallon capacity each, which are used in delivering oil from the six compartments to the customer's tank.

On the top of these compartments there is a grating to give the driver easy access to the filling spouts of the six compartments. Just back of the rear faucet and in front of the rear wheel is a compartment attached to the under side of the truck bed which carries waste, which is used by the truck driver in keeping the truck and cans clean. On the rear of the truck there is a special rack for carrying case goods.

Many Trucks as Feeders, No Doubt

No doubt motor trucks did much to help handle the freight indicated in recent railway car loading figures; and the loadings are increasing right along. Car loadings for the week ended June 10 totaled 846,002, a gain of 95,857 over the previous week, and 58,719 over the same week a year ago. Idle cars throughout the country for the week ended June 8 totaled 465,867, a decrease of 14,429 from previous week.

If the huge railroad strike many expect to begin early in July becomes a reality, motor trucks will have all they can do.

White Motor Co.'s Condition Fine

The quarterly dividend of $1 per share of the White Co., Cleveland, was payable June 30. Since December 31, loans have been reduced from $3,600,000 to $1,700,000, with no customers' notes discounted, and cash has increased $1,250,000. More than 3000 men are employed, compared with 2000 when the year began. The output prospect for the year is 9000 trucks.

70%

of all the metal wheels on motor trucks are

SMITH WHEELS

Why?

Because they are

100% right in design 100% right in quality
100% dependable
Made in three types
Rigid Cushion Pneumatic

THE amount of a truck maker's business nowadays is measured by the amount of his truck sales. SMITH WHEELS help sell trucks. They first sell the eye, then their performance helps keep the truck sold.

In selling trucks equipped with wood wheels in this metal age, the wood wheels in themselves put up a great sales resistance.

Our business in volume is almost back to where it was in the abnormal days of the war. Place your requirements with us as far ahead as possible to assure satisfactory deliveries.

PACIFIC COAST REPRESENTATIVES
A. H. COATES CO., 770 Mission St., San Francisco, Calif.

SMITH WHEEL
SYRACUSE N Y U S A

Tractor Department

Federal Reserve vs. Tractor Sales

THIS should interest tractor men far more than drawbar pull. It is about a much more important pull. Perhaps something introductory about John Skelton Williams should be mentioned in connection with his statement that "the collapse in prices of agricultural and other commodities was contemporaneous with the Federal Reserve Board's ruinous policies." Mr. Williams regards the Federal Reserve idea itself as a national blessing, but its management a public calamity.

Mr. Williams, during more than 25 years, was a strong factor in a number of banks and trust companies, in the South and New York City. He was on the American Bankers' Association executive council. He planned, organized and was president of the Seaboard Air Line railway system of about 3000 miles. He quit that for three years, was recalled after the 1907 panic, restored its credit, retired again, and then was made Controller of the Currency by President Wilson and Secretary of the Treasury McAdoo. Wall Street opposed him, and after Wilson got out Williams was gotten out. He again is a banker in Richmond, Va.

It would be well for tractor men to read the latest about Mr. Williams and the Federal Reserve management, in Dearborn Independent, June 17 issue. As Controller of the Currency, he practically functioned as Federal Reserve is supposed to, before it began. The article not only indicates, as often has been charged, that banks everywhere send depositors' money to New York because it earns them more than by loaning it to depositors, who and their communities sometimes need it badly, but on the other hand, smaller banks, in common with agriculture and other commerce, suffered severely and unfairly through the "calamity of artificial deflation" and still are subject to discrimination.

One cited instance of this happened late in 1919, when the Federal Reserve Bank of New York, Mr. Williams says, was supplying, on loans and rediscounts and through purchase of its acceptances, about $130,000,000 to one New York banking institution which had been conspicuous for speculating operations. It is said official figures will prove many millions were used in loans to its own executives, and to syndicate enterprises in which they were interested. That $130,000,000 exceeded by $16,000,000 the total loans and discounts, plus "bills and acceptances purchased" in the open market, by all the Federal Reserve banks of two large cities—Minneapolis and Dallas. This, Mr. Williams says, was unfair concentration of Federal Reserve funds, in loans to a bank conspicuously speculative.

Another instance is of the New York Reserve Bank loaning $250,000,000 to two member banks there, conspicuous speculatively, at a time when six other Federal Reserve banks (districts 1, 2, 3, 4, 5, 8) had loaned only $15,642,000 to about 4000 member banks—a ratio of $125,000,000 against only $3875. How much of the unfair ratio was used to finance theatrical and other parasite enterprises, while productive commerce suffered, is not indicated.

Another point is on the building of a $25,000,000 marble palace for the New York Federal Reserve Bank, with the people's money, at a time when Congress itself had ceased authorizing new public buildings. The Federal Reserve, understand, is not a Government business, though its governor was appointed by the President. Another point is that at the end of last year the Reserve Bank in St. Louis had a staff of 517 persons, costing the public $987 per capita per annum, while the Cleveland bank had 598 on its staff costing $14,063 per capita per annum. Mr. Williams believes all these and other conditions indicate "something rotten in Denmark."

The interview with Mr. Williams, practical, hard-headed banker, indicates that not only is the Federal Reserve management extravagant, thereby reducing Uncle Sam's stipulated and relatively small share "after expenses," but in its huge, concentrated operations in New York City, its headquarters, is in effect hand in glove with a money-handling tribe whose benefits thereby "have been of the kind that would have warmed the cockles of the hearts of the most predacious of last generation's famous financiers."

If the writer of this were a tractor man, or any other kind of business man, he would get and read that article if it cost $100—if he had the money. It concerns the question whether, in hard times especially, the people's money, deposited in banks, shall be diverted from agricultural and other productive development, or wasted in extravagant expenses and, in huge sums, supplied to friends of the Federal Reserve management for speculative purposes, or even such sure-thing enterprises as large chains of motion picture theaters—which do not need tractors and in which neither food nor clothing is produced.

Legge Heads International Harvester Co.

Alexander Legge, vice president and general manager of International Harvester Co., Chicago, now is president, succeeding Harold F. McCormick. Mr. McCormick, whose retirement was voluntary, now is chairman of a newly created executive committee of the board of directors. Mr. Legge has been with the company 30 years. He began as a collector for the Omaha branch of the old McCormick Harvester Co., which later was taken over by International.

Holt Track Laying Rights Upheld

San Francisco news is that, by decision of Special Master in Chancery Wright, all litigation over the claim of Holt Mfg. Co., of Stockton and Peoria, to sole patent rights on track laying types of tractors, ends, and others using the idea will do so under license.

Track laying "tanks" did much to help win the war for the Allies. They are accredited to Col. E. D. Swinton and Benjamin Holt.

Distributing Ex-War Tractors

The Bureau of Public Roads, United States Department of Agriculture, has received as surplus war material 780 10 ton caterpillar tractors and 200 5 ton tractors. They are located at Camp Lewis, Wash., and the Erie Proving Grounds, in Ohio. Distribution to the states will be completed soon.

An Imperial County, Calif., publication tells of an Italian rancher who stopped his tractor when a motor tourist, in trouble, asked: "Have you a monkey wrench?" The noble Roman replied: "No, deesa ain' no monkey rench. Where you seea da monk? Deesa fruit rench!"

"Nothing But JAHNS Pistons"

Demanded by Motorists "Who Know"---
Recommended by Dealers "Who Care."

There is full measure of security in every Jahns Quality Semi Finished Grey Iron Replacement Piston. Years of experience in honestly and accurately building "nothing but pistons" has made the name of JAHNS a symbol of all 'round satisfaction.

Precisely light enough for the lightest work and heavy enough for the heaviest work. Promptly available for every size and kind of motor.

Ask us for the list of Jahns dealers in your territory.

W. H. JAHNS
"NOTHING BUT PISTONS"
2652-2664 Lacy Street **Los Angeles, Cal.**

JOHN H. DIELMANN CO., Inc.
THE LARGEST AUTOMOBILE PARTS DISTRIBUTORS IN SOUTHERN CALIFORNIA
JAHNS QUALITY PISTONS
AUTOMATIC PISTON PINS
R. S. P. AND CHROME NICKEL VALVES
QUALITY SNAP RINGS
DOUBLE DIAMOND GEARS
HEAT TREATED AXLES
PERFECTION SILENT TIMING GEARS
BEARINGS—BUSHINGS
STARTER GEARS—OIL RINGS
Phone 21831 " 271226
1423 SOUTH HOPE ST., LOS ANGELES
Phone 21831 " 271226

Facts Affecting Tractor Interests

Twenty-four Northern and Western states now have 30 specialists to devote full time to farm management extension work. County agents in 895 counties report that they distributed 51,083 farm account books in 1921; 519 counties reported 18,448 books kept, and 444 reported that 8454 farmers were assisted in summarizing their accounts. County agents in 237 counties report that 2972 farmers made changes in their business as a result of keeping accounts. More than 800 farm account schools, with an attendance of 20,000, were held in 1921, the United States Department of Agriculture reports.

Agricultural colleges in 45 states are giving courses in agricultural economics and allied subjects this year. In a number of states the courses include studies in marketing, co-operation, farm management, and commercial geography.

Green manuring—plowing under green crops—as a means of soil improvement, although it has been emphasized in recent years, hardly can be called a new discovery, says the United States Department of Agriculture. It is one of the oldest methods. Crops for this purpose were used by the ancients, the Romans using lupines, which were sown in September and turned under in May for the benefit of the following crop. In Germany the use of lupines began in the middle of the nineteenth century and has proved an important factor in reclaiming the sandy lands of parts of Prussia. In England, legumes and other plants are used; in India and Japan the farmers gather green plants of many kinds, sometimes even cutting twigs from the trees and carrying them to the rice fields. In the United States the use of special green-manure crops is much more general in the South than in the North. Under irrigation they play an important part in orchard culture in the West, but not under dry farming conditions.

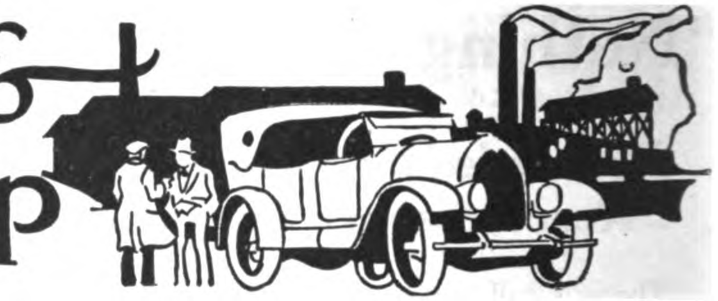
Some 40,000 school children in Hawaii are enrolled in garden work as one of the results of the efforts of the local agricultural experiment station of the United States Department of Agriculture, co-operating with other territorial organizations to encourage diversified production and the local growing of table products.

The farmer who has refused to buy implements and necessary machinery in the last two years has this year cleaned out the stock of retail implement dealers, who report supplies lower than ever before. This applies to Nebraska, the Dakotas, Minnesota, Colorado and Wyoming.

Lem Loosehead says: I see Ed. Howe sez in his monthly magazine thet honesty is selfish. Well, I've seen a good many unselfish people, then.

The early bird catches the worm and the late bird the hookworm.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

As the year promises to break all motor car manufacturing records, the makers' conservatism is impressive. They are not plunging. However, they are giving specifications on material now to as far ahead as October. A summer lull is looked for, but has not yet come. It is not likely to be as pronounced as expected by some.

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Farmers have resumed purchasing. Their crops are coming in nicely; better than estimated some time ago. By July they will have entered the lists heavily, and by August will be big customers. Inasmuch as they have purchased more than 50 per cent of the motor vehicles in the past, and hardly have been buyers for the last two years, their business should more than overcome any slump ordinarily felt during the summer months. It is not improbable that monthly gains will go right on for awhile.

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The recent statement from Omaha that the farmer of the Middle West is again in good financial standing, and that his purchasing power is increasing faster than that of some of the merchants in his territory, is interesting. The farmer was in the market some time in advance of expectations,—while merchants were still talking about the "farmers' strike."

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There is more money ready to use than people realize. There is $1,500,000,000 carried today by Federal Reserve. It is stated by a financial authority that rediscounted paper is less than a year ago. Business expansion is having little trouble in obtaining new capital. As a result of the recent slump, workers are turning out a larger production per capita than ever, and wages, which were readjusted to a low level, have been increased in many instances. One automotive manufacturer stated that this was due to the high productivity of his workmen.

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Concerns which got cold feet and canceled their advertising right and left during the slump are beginning to show courage again. They have found that it was poor business to stop their selling methods when orders were most needed. B. C. Forbes says this is a sign of returning sanity, and that it will become more pronounced in the next two months. He says the people now are showing a disposition to make the best of things, and that this is a change from a few months ago. He has found that manufacturers, merchants and importers are willing to do business at a fair profit, and that changed wage conditions have been accepted by the workers philosophically. He says these signs of good sense augur well for a healthier and more active business, and fuller employment.

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Some of the manufacturers are at top speed. These are the ones who never did let down in advertising or in real sales effort, and who are today having their reward. Others, who failed to see the necessity of advertising and concentrated sales efforts during the slump, are now looking enviously at the marked success of their more wideawake competitors, and are marveling at their own lack of headway. Of course, even makers who failed to prepare for the present situation are finding demand from dealers and distributors who are returning to the field and looking for cars to handle. Attractive discounts help, too, of course; but persistence pays more permanently.

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Second choice cars are running short more gradually. These are the less known cars, poorly advertised and not properly exploited. Buyers try for the better known and popular makes, and, unable to secure promise of deliveries for weeks ahead, turn to the others. Many of the "second choice" makers have been doing almost nothing and are now delighted with their returns, yet they will not even today see that proper advertising during the slump, following advice of successful advertisers, would have done good. Rather, they come in on the tide and are disposed now to brag of the money they saved, forgetting that had they advertised consistently when business was slack, their returns would have been better during bad times, and larger today. They belong to that class which says, when there is a car shortage: "Why advertise when we could not sell our cars anyway?" and then, in times of car shortage, say: "Why advertise when we cannot fill our orders?"

—

As to prices, remember that the price of labor is still very high, and that labor enters largely into the production of cars. Materials, it has been said, are being supplied to the makers at figures actually below cost in many instances. For example, one speedometer maker was forced to help a certain maker to reach a price on his car, and cut his prices per speedometer to 50 cents lower than cost of manufacture. Stories of that character come out again and again in talks with representatives of parts and material manufacturers.

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The cry of "Let's go!" is not going to put people back on Easy Street, according to Edward Marshall, who says the people must forget get-rich-quick ambitions and think only of a return to that steady, ceaseless, prosperity growth, favorable to every man and woman of the nation. And George E. Roberts, president of the National City Bank, says the theory of trying to bring back past boom times by the cry of "Let's Go," and then doing nothing else, is all an error and that there must be readjustment of basic conditions.

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Dealers and distributors who retired from the field temporarily during the depression are returning, say the makers.

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The automobile business now is rated as a $2,000,000,000 industry. Its success in coming back into a greater than normal stride has had much to do with strengthening general business conditions throughout the country. Its demand on the copper, aluminum, leather, steel, lumber and other basic material manufacturing fields is enormous. While Julius H. Barnes, president of the Chamber of Commerce in the United States, recently attributed the return of the automobile business to the fact that the American family has to pay out only 40 per cent of its income for food supplies, compared with 80 per cent for the European family, it is undoubtedly more nearly the fact that the increase in the motor car business is due more to improvement in general business and the necessity of the motor car to business and general living.

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In view of the statements of financial men, the automobile makers cannot be blamed for being cautious. All makers are watching reports, and chary in making commitments. This, of necessity, is going to hold down production to an extent. The year may run far ahead, or only slightly ahead of 1921, for people will go through the year in the old car if the predicted shortage becomes an actual fact.

S. CLYDE KYLE

Announcing the Pacific Coast Representative for

SHULER FRONT AXLES

We are pleased to announce to the trade the appointment of Mr. S. Clyde Kyle, of San Francisco, as sales representative of the Shuler Axle Company on the Pacific Coast. Mr. Kyle is well known to the automotive industry in this territory, and we are certain that SHULER AXLES under his guidance will receive the favorable consideration that is warranted by their unusually high quality.

SHULER BUILDS FRONT AXLES EXCLUSIVELY

for Trucks, Tractors, Trailers and Motor Busses

Recognizing that the front axle is one of the most important major units in automotive assembly, we have spent years in developing a line of front axles that offers manufacturers exceptionally high quality and efficiency. Our product enjoys an enviable reputation and is widely used as standard equipment by many of the most discriminating builders.

We bespeak your kind consideration for Mr. Kyle. Through him, we tender to Pacific Coast manufacturers our services. We shall welcome the opportunity to aid in designing SHULER FRONT AXLES into your motor trucks, trailers, tractors and motor busses.

SHULER AXLE COMPANY

INCORPORATED

Front Axles for Trucks, Tractors and Trailers

3001 Jones Street **Louisville, Kentucky**

S. Clyde Kyle, Rialto Building, San Francisco
Pacific Coast Representative

Leland May Begin Anew.

Henry M. Leland, and his son, W. C. Leland, having severed all connections with Henry Ford and Lincoln Motor Co. It is said they may start anew, with Eastern capital. Rumors that the Lelands would get through were rife in financial and industrial circles of Detroit for some time. Mr. Ford's ideas of how an automobile plant should be run, and his insistence that these be adopted, did not please the Lelands, who, after Mr. Ford purchased the plant, it is said, took hold and carried through policies, or attempted to do so, just as though they were still in control. It is stated that Mr. Ford insisted upon economical production.

An interview with him in Detroit, and comments upon the interview, indicated he had informed the Lelands the reason of their failure was due to their not having adopted Leland as a name for the car. All the Ford interests, including the Lincoln, now are under one head, and the executives in the Lincoln plant are Ford men. The Lelands were salaried men only after Ford bought the plant.

Richard Spillane, financial editor of Public Ledger, Philadelphia, says that when Ford had agreed to buy the Lincoln property, Leland asked him: "Why did I fail?", and Ford replied: "Because, after you designed the Cadillac, which marked you as a great engineer, you then did not give your own name to your own car. There are many Lincoln products. There would have been only one Leland car, and the public would have sensed that it was the pride of your life, and that would have been worth millions to you."

It is said Leland will be back in the field in three months; that his new backers offered to buy back the plant but Ford refused; and that the break, which preceded this was due to the Lelands finding conditions intolerable. Not only did differences on policy arise—the real Ford authority being vested in P. E. Martin, general manager of Ford's Highland Park plant, and in Charles R. Sorenson, manager of the River Rouge plant—but relatively small matters irritated. For instance, the reception room man, a Leland man, and regarded by the Lelands as valuable, was displaced despite the alleged promise of Ford to "put the Lelands and their capable assistants where they can continue to be of great service."

* * *

Elwood Haynes, Doctor of Laws.

President William L. Bryant of the University of Indiana conferred the honor degree of doctor of laws on Elwood Haynes, president of the Haynes Automobile Co., at the ninety-third commencement exercises of the University recently held at Bloomington.

The degree was conferred on Mr. Haynes for distinguished services in the field of science. Addressing Mr. Haynes before the vast assemblage of students, faculty and alumni, President Bryant said:

"Elwood Haynes, the world knows you best as the maker of the first automobile in America. You will have no less enduring remembrance as a scientist, and as an inventor of metals of capital importance in the industry and arts. As a mark of this, your work has just been crowned by the city of Philadelphia upon the recommendation of the University of Pennsylvania, the American Philosophical Society and the American Academy of Sciences.

"In recognition of these achievements and of your enlightened ideas and your civic courage, the Indiana University confers upon you the degree, doctor of laws."

Recently Mr. Haynes was awarded the John Scott medal, certificate and premium for his discoveries in stainless steel, stellite and chrome iron, by Worcester Polytechnic Institute, from which he graduated in 1881. The advisory committee which nominated him for the award comprised a number of nationally known educators and President Vauclain of Baldwin Locomotive Works. The fund from which these awards are made was left to the city of Philadelphia in 1816 by John Scott, Edinburgh chemist. The limit he fixed for the premium, to be given "ingenious men and women who make useful inventions," was $20, but during the century has increased to $800—enough to buy Mr. Haynes a nice seaside or mountain lot on the Pacific Coast, on which any sort of shack will do for comfortable sitting through the reminiscent years, to watch the world wag on; if Mr. Haynes is so disposed, and "saturation" ends the automobile business, and so on.

CLARENCE A. EARL HONORED.

Bert Cobb, one of America's foremost cartoonists, who is preparing a series of cartoons of "Captains of the Automobile Industry", has paid Clarence A. Earl, president of Earl Motors, Inc., Jackson, Mich., the compliment of giving him third place on the list of executives whose likenesses he will reproduce. Mr. Cobb's series of cartoons are being sent to newspapers in all parts of the country and are arousing considerable interest in automobile circles.

* * *

Roy D. Chapin, Master of Arts.

Roy Dikeman Chapin, president of Hudson Motor Car Co., was given an honorary degree of master of arts by University of Michigan at its 78th annual commencement. Among 10 others so honored were Secretary of State Charles E. Hughes; Alexander J. Groesbeck, governor of Michigan; and Sir Thomas Lewis, London, Eng.

Mr. Chapin's record will do. He left the university for the automobile business when the latter was young, has been Hudson's executive head practically since it began in 1909 and. at the age of 42, is one of the industry's youngest presidents and one of the youngest men ever given his alma mater's honorary degree. Recently he was re-elected vice president of the National Automobile Chamber of Commerce. For years he has been a leader in highway development.

* * *

M. and A. M. A. Elect New Members.

The following companies have been elected to membership recently in the Motor and Accessory Manufacturers Association: Akron-Selle Co., Akron—screw machine parts, metal stampings, truck bodies, gasoline gauges; Broad Brook Co., New York—automobile fabrics; Buckeye Forging Co., Cleveland—automotive brake rod assemblies and drop forgings; Douglas & Lomason Co., Detroit—windshields, running boards; L. H. Gilmer & Co., Philadelphia—cotton woven endless belts and belting; Glidden Co., Cleveland—paints and varnishes; Harvey Spring & Forging Co., Racine, Wis.—automobile leaf springs; Holley Carburetor & Co., Detroit—gasoline and kerosene carburetors; The Houdaille Co., Buffalo—fittings for shock absorbers; Indiana Steel Products Co., Chicago—magnets, cold rolled and drawn steel and wire products; Nairn Linoleum Co., New York, linoleum; Pharo Mfg. Co., Bethlehem, Pa.—governors for trucks and tractors; Spencer-Smith Machine Co., Howell, Mich.—pistons; Stemco Eng. Co. (reinstated), Dayton, O.—gasoline, gauges; Ternstedt Mfg. Co., Detroit—automobile hardware; Universal Products Co., Detroit—universal joints; Westinghouse Lamp Co., New York—Mazda miniature lamps and spark "C" ignition testors; Wickey Battery Co., East Chicago, Ind.—semi-dry rechargeable storage batteries; Wyman-Gordon Co., Worcester, Mass.—forgings.

* * *

Hayes Wheel Co. Stock Offered.

A few days ago 30,000 shares of no par common stock of Hayes Wheel Co., Jackson, Mich., were offered the public by a banking group at $27.50. Established in 1908, Hayes is stated to be the world's largest manufacturer of automobile wheels.

Reynolds Spring Dividends.

The board of directors of Reynolds Spring Co., Jackson, Mich., recently declared a dividend of 1¾ per cent on the preferred "A" stock, payable June 30, and one of 14 per cent, being all of the accumulated dividends on the preferred "B" stock and payable June 30. All of the dividends on both classes of preferred stock having now been paid in full in cash, the board may at its discretion declare dividends on the common stock from time to time.

Donald Ford, of Goodbody & Co., New York City, members of the New York Stock Exchange, has been elected a director of the Reynolds Co., succeeding Rafe S. Craft, resigned.

* * *

Jordan Declares Dividend.

At a recent meeting of the board, Jordan Motor Car Co., Inc., Cleveland, the regular 1¾ per cent quarterly dividend on preferred stock was declared. President Edward S. Jordan reported the factory running at capacity, and earnings in May more than sufficient to take care of preferred stock dividend requirements for the year.

* * *

General Motors Dividends.

The board of directors of General Motors Corp. met in New York recently and declared a dividend of $1.50 a share on the preferred stock, $1.50 a share on the 6 per cent debenture stock and $1.75 a share on the 7 per cent debenture stock, payable August 1, 1922, to holders of record at the close of business July 3.

* * *

Studebaker Sales Break Record.

Studebaker production, sales and financial departments during May shattered all previous records. Sales were approximately 14,000 cars, production 10,853 cars, and collections $17,000,000. In May, 1921, 7383 cars were sold.

* * *

Amazon Trebles Output.

Amazon Rubber Co., Akron, announces 85 per cent of capacity, and that orders in hand make it imperative to increase production to total capacity immediately. Output has been trebled in a comparatively short period.

* * *

Goodyear Tires Exceed 45,000,000.

Akron news, June 10, was that Goodyear, making tires 23 years, had built its 45,000,000th tire, which will be exhibited in 82 Goodyear branches.

* * *

Some Body to this Order.

Hayes-Ionia Co., Grand Rapids, Mich., reports the closing of contracts for $15,000,000 worth of bodies to be completed by June 1, 1923. About $12,000,000 represents bodies for Durant Motors.

* * *

To Refinance American Dunlop.

F. A. Szarvasy, chairman of the board of Dunlop Rubber Co., Ltd., is on his way from England to arrange new financing for American Dunlop Tire & Rubber Corp., Buffalo, N. Y. It is reported British officers of the company are very optimistic regarding the future of the Buffalo plant.

* * *

Jordan Prosperity Flows On.

Jordan Motor Car Co., Cleveland, has reached a production of 1000 cars per month, or 40 per day, or 12,000 per year, which would exceed $25,000,000, gross. Production in April and May was at a record pace. Mr. Jordan says the demand seems to be far from satisfied and that barring California it has been largely from Ohio and other states east of the Mississippi. In May the Chicago agency delivered 147 cars, the New York agency 132, Philadelphia 105, Boston 98, and Cleveland 86.

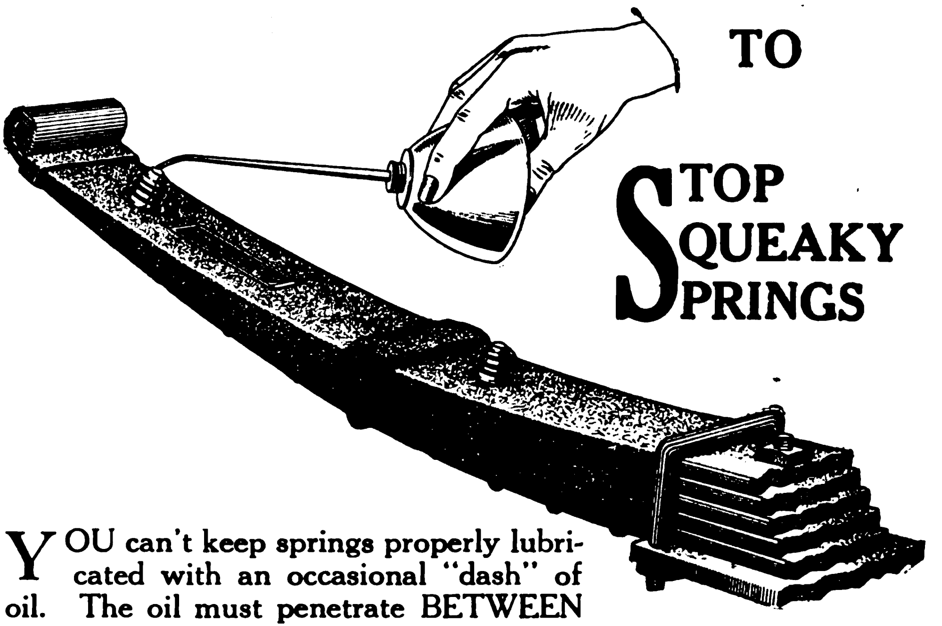
* * *

To Manufacture Wing Automobile.

Wing Motors Corp. has been incorporated under Delaware laws for $10,000,000, to establish a plant in Binghampton, N. Y., to make the Wing automobile, the principal feature of which is the front spring suspension. Two springs are placed between the two forward wheels, in line with the axle instead of with the chassis. A Continental 6 cylinder motor will be used, and other parts are standard. The car will sell for about $1800.

Tourist camps exceed 2000 now.

HERE'S THE WAY TO STOP SQUEAKY SPRINGS



YOU can't keep springs properly lubricated with an occasional "dash" of oil. The oil must penetrate BETWEEN THE LEAVES—it must get in where the friction is before it can do any good.

—And protect them from dirt, dust, mud, water, snow and slush.

Ask 'em to Buy

RELIABLE SPRING OILERS COLUMBUS, OHIO "Put the Grease Where the Squeak Is" TRADE MARK REGISTERED

It's easy to oil your springs if you car is equipped with RELIABLES. Simply insert nozzle of oil can in the self-closing cap, as shown above, give it a liberal squirt, and the job is done. The oil saturates the felt pads inside the waterproof cover, and every movement of the springs pumps the oil in BETWEEN THE LEAVES!

That's what stops the squeak,—and keeps the springs thoroughly lubricated all the time—summer and winter, rain or shine. Also it means easier riding and better tire mileage.

Made to fit all makes and models of cars. Guaranteed for three years. Prices range from $4.00 to $15.00 per set.

Get a set today. Ask your dealer. If he can't supply you, write direct, giving dealer's name, and make and model of your car.

DISTRIBUTORS WANTED

Excellent proposition open to financially responsible parties who can qualify as distributors. Several choice territories still open. A money-maker for wide-awake men. Write for particulars.

TO DEALERS

Unique sales plan makes easy sales and quick turn-over for dealers. Liberal discounts. Write for details.

The Reliable Spring Oiler Co. 207 Reliable Bldg. Columbus, Ohio

You'll Feel at Home at the Botsford

When Motor West selected this comfortable, home like, and fire-proof hotel as San Diego headquarters for all who read and travel, the three chief demands of the well-read traveler were considered.

LOCATION - SERVICE ATMOSPHERE

Manager Floyd B. Kirk takes especial pride in the central location of his house—just north of Broadway on 6th street—the courtesy extended to guests by all employes, the up-to-the-minute accommodations he has to offer, and the cozy lure of hominess that pervades his entire establishment.

Before you start, be sure of Special Rates and Reservations by wiring—

HOTEL BOTSFORD
SAN DIEGO, CAL.

Hanson Buys American Motor Co.

American Motor Co., Jacksonville, Fla., has been purchased by the Hanson Motor Co., Atlanta. Each concern is capitalized at $1,500,000. The Hanson Co. will increase its production considerably, soon.

* * *

Two Birds with One Stone.

Airplane engine production by Packard Motor Car Co, will run to big figures this year. The company has never made any effort to enter this field, but its success in building Liberty motors will bring it nearly $1,000,000 worth of business. The value of this is stated to be that it enables the maintenance of a large research and engineering staff for both airplane engines and Packard motor cars and trucks.

* * *

Ford's Wheel-Making Plans.

Ford Motor Co. gradually is completing its plans to build nearly every part of its car. Naturally, concerns that supply the company are affected. Ford's Hamilton, O., plant soon will be building 2000 sets of wheels a day. Recent reports indicate that Kelsey Wheel Co. is manufacturing Ford wheels at the rate of 360,000 sets a year; and Hayes Wheel Co. about 500,000. This would place the yearly production for Ford alone at 1,340,000 sets.

* * *

Lawrence Heads New Tire Company.

J. C. Lawrence has been elected president and general manager of Racine Horseshoe Tire Co., Racine, Wis., which is the reorganization of Racine Auto Tire Co., manufacturer of Horseshoe tires. The latter company failed. Mr. Lawrence for many years was with Firestone.

* * *

To Sell Allen Property Again.

Another order has been issued for sale at auction of the property of Allen Motor Co., Columbus, O. The company also has a plant at Bucyrus, O., and much real estate. At a former sale a $570,000 bid was accepted, but the bidder failed to complete the deal.

AC
The Standard Spark Plug of the World

Every motorist is a prospect for the sale of AC Spark Plugs because most cars are factory-equipped with AC's and there are specially designed AC's for all other engines, too.

A C Spark Plug Company
FLINT, *Michigan*

* * *

Carter Carburetor Has New Owner.

The plant of the Carter Carburetor Co., St. Louis, has been taken over by American Car & Foundry Co., and will be operated as its carburetor division. Sales and service will be handled by a separate company known as Carter Carburetor Corp., with H. H. C. Weed, who was in charge of the old company, continued as general manager and, associated with him, practically all of the old Carter organization.

* * *

For Piston Friction Research.

A. Ludlow Clayden now is chief engineer of gas engine research for the Sun Co., Philadelphia, which is equipping a laboratory at its research building at Norwood, Pa. Mr. Clayden's first undertaking will be a rather elaborate study of factors which affect engine lubrication, with especial regard to piston friction.

* * *

A. E. Houghton, former Chicago district representative of Dodge Brothers, has been given the newly-created post of director of districts. He will check up all district activities as a means of carrying out uniformly all policies established by the factory.

LOS ANGELES WAREHOUSE COMPANY
MAKES A SPECIALTY OF AUTOMOBILE STORAGE

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
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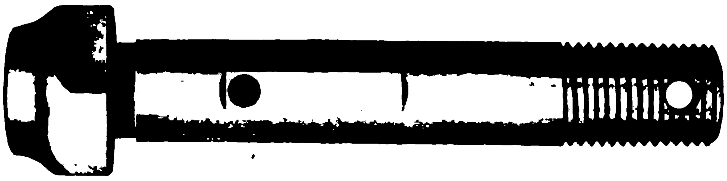
—satisfaction for Garage Men in handling



SECURITY
TIE-ROD BOLTS

LOTS of cars that come into your place need new Tie-Rod Bolts. Lots of owners of such cars would say "go ahead," if you suggested renewal to them and actually showed them how their present bolts are worn.

Talk "safety first" and "free from rattles"—that will bring you the business. You'll be surprised to see how easy it is to get.

Then use Security Tie-Rod Bolts for your jobs. They run more perfect and more uniform than any bolts you've ever handled. You can depend upon sizes, and quality is unreservedly *right*. These bolts are *guaranteed* — that means they'll stand up under service.

Security Tie-Rod Bolts are hardened, precision ground and duplicates in design and measurements of the original bolts supplied by the car manufacturer.

Our Special Chart makes it easy to order and maintain stock. Send for a free copy—it insures your getting *the right bolt for the right car.*

ORDER FROM YOUR JOBBER

SECURITY MANUFACTURING CO.

1047 West 16th St., Los Angeles, Calif.

Bramwell, Veteran, Passes On.

R. B. Bramwell, for the last 14 years advertising manager of Michelin Tire Co., died of pneumonia at his home in New Brunswick, N. J., late in May, after a brief illness. Mr. Bramwell entered the industry in 1900, when he joined the DeDion Bouton Motorette Co., which sold the French DeDion car. While with this company Bramwell made the first long distance run on record, from New York to Boston, and considered remarkable. Later he became advertising manager for the Pope-Toledo Co., and was also with the Class Journal organization about 4 years. He joined Michelin in 1909.

* * *

Schwartzkopf's Worldly Trials End.

E. E. Schwarzkopf, one of the veterans of veterans in the industry, died late in May in Roosevelt Hospital, New York, at the age of 70 and after an illness of several months resulting from a general breakdown. "Schwarzy" came from Austria in the 80s, and soon started an automobile magazine. Later he established Automobile Topics, selling it after several years. At one time he developed a 14 cylinder car. Until recently he published an export journal. After his breakdown in New York, several months ago, he was cared for by friends in the industry and sent to the hospital.

* * *

Mitchell "White Streak" on Test Run.

The Mitchell "White Streak," on its 10,000 mile sealed-hood endurance run, arrived in New York City 8 days after its start made from Chicago. Up to a recent date the "White Streak" had covered 1355 miles over rough highways and the car has given a sensational exhibition as to what may be expected of it for the rest of the test.

From Chicago to Detroit, the car averaged 17½ miles to the gallon of gas. On the trip to New York no change of water was made in the radiator, yet the moto-meter never rose above efficiency.

* * *

Tentative Ford Export Site.

A party of engineers representing Ford recently inspected the site reported as selected tentatively for the principal assembly plant on the Atlantic Coast for export. It is at Norfolk, Va.

* * *

To Merge Kelsey's Enterprises.

John Kelsey Investment Co. has been formed in Detroit, with capitalization of $1,500,000, in 15,000 shares at $100 a share, to consolidate the enterprise of John Kelsey under one head and simplify management.

* * *

McMillan Heads Mitchell Sales.

A. G. McMillan, who has been general manager of the New York branch of the Mitchell Motors Co., Inc., has been appointed director of sales at the factory in Racine. John Tainsch will continue as general sales manager, under Mr. McMillan's direction. Paul C. Lott, who was with Mr. McMillan in New York, has been named sales promotion manager at the factory.

* * *

Springford Takes Larger Job.

H. H. Springford, special assistant to President E. G. Wilmer, of Goodyear Tire & Rubber Co., has resigned to accept the presidency of the Steel & Tube Company of America, in Chicago. No announcement has been made as to his successor at Goodyear.

* * *

Rackliff Aids Dayton Wheel Sales.

H. L. Rackliff Co., Cleveland and New York, automotive marketing counselor, has been retained by Dayton Automotive Wheel Co., Dayton, to assist in its marketing plans. Officials of the Rackliff organization made an extensive survey of the Dayton Co.'s possibilities, and are enthusiastic over the reception which motor car and motor truck manufacturers and replacement jobbers have given the Dayton Wood-Disc wheel.

Rackliff Co. will also act as marketing counselor for Victor Mfg. Co., Dayton, supervising sales and advertising, according to a later announcement, also for Artcraft Top Co., Cleveland.

(More Factory Items on Page 63.)

Motorists' Letter-Box

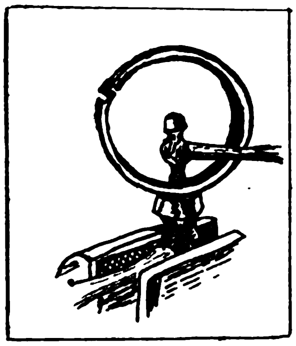
Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

PEENING PISTON RINGS.

Editor Motor West: What is meant by peening piston rings? I hear of it so much. What is the advantage of peening rings and how is it done? I see rings advertised as peened rings and according to the advertisement they seem to be much better than the ordinary ring.—A. F., Fresno, Calif.

When a piston ring has been used some time it loses elasticity and does not expand and make a tight joint between the piston and cylinder wall, and the result is a leak past the piston. By peening it will give the ring new life.

Peening is shown in the illustration. First take a large hammer in a vise. Set the outside of the ring against the face of the hammer. Take a small peen hammer and strike the ring on the inside with the peen of the hammer, being careful to strike the part of ring which is resting in the vise. Peen the ring all the way around. As you pound it you will notice the slot in the ring widening as the ring is straightened out. By working the metal in this way you are increasing the tension of the ring.



PEENING PISTON RINGS.

Peening is very good for old rings when used a second time. New rings which have been peened will last much longer than the ordinary ring.

BALL BEARINGS.

Editor Motor West: I am continuously replacing the ball bearings in the front wheels of my car, and can find no reason why they should wear out so soon, as the car is never overloaded and the wheels run true. Can you advise me as to the cause of this trouble?—A. T. N., Pocatello, Idaho.

Few owners give ball bearings the attention they deserve, usually waiting until the garage man calls attention to the injury done by breakage. At least once in six months ball bearings should be inspected, the rough or worn balls replaced with perfect ones and the ball race filled with graphite grease.

The adjustment of the bearing in front wheel is also very important. The races should be adjusted with the car on a jack and the wheel free from the ground. They should be just tight enough so that the wheel will spin freely without binding. You will find a lock nut on spindle. By releasing this you can screw the inner race in on spindle until bearing is in proper adjustment.

MOISTURE ON SPARK PLUGS.

Editor Motor West: My motor at intervals fires irregularly. I have found that if I wipe the outside of the porcelain without even removing the plug from the cylinder it will run well, firing regularly for a short time, and start missing. Why?—J. M. B., Tucson, Ariz.

Irregular firing is often caused by moisture gathering on the exposed part of the porcelain of the plug. This moisture has conductivity enough to pass the spark plug current (which is of very high voltage) to the metal of the engine over the outside of the porcelain, and the spark in the cylinder ceases. This trouble may be cured by rubbing the outside of the porcelain with vaseline. From all indications this is the cause of your trouble.

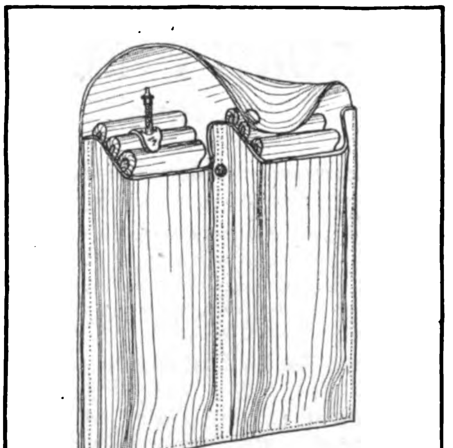
MAGNETO TEST.

To test the magneto, disconnect the lead wires to the spark plug and set the ends ⅛ to ½ inch from some metallic part of the engine, and see if sparks jump from the wires. If not the magneto is faulty.

CASE FOR EXTRA TUBES.

Editor Motor West: I have had considerable trouble with inner tubes which I carry as spares, I can find no place to carry them where they will not rub or chafe. I have had holes rubbed in several. How do you carry yours?—H. C. N., Fresno, Calif.

A very handy carrying case can be made of an old side curtain or hood for tops; if these are not available use oil cloth or heavy canvas, and make up as shown in illustration. Cut the back as shown, according to size of tubes when folded., then sew a piece onto this at sides and bottom. When this is finished run a seam down through the center, thus forming two pockets. A snap can be used to fasten flap over end of tubes.



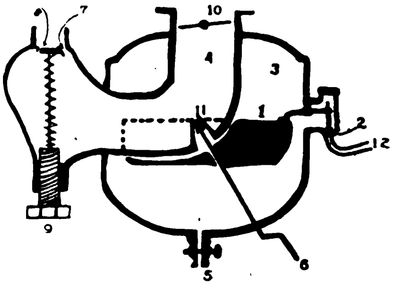
CARRYING CASE FOR TUBES.

CARBURETOR ELEMENTALS.

Editor Motor West: Will you please explain the carburetor, giving the names of parts and how the gasoline passes through it, and the method of adjusting?—A. E. R., Salt Lake City.

The accompanying illustration will give you a line on the names of the principal parts. The gasoline is placed in the supply tank, from which it passes through the feed pipe (No. 12) to the carburetor. Passing through the float valve (No. 2) it enters the float chamber (No. 3). As it fills the float chamber it passes into the spray nozzle (No. 11). When it reaches a level just below the tip of the spray nozzle, the float in the float chamber is raised high enough to close the float valve (No. 2) through the action of the rocker arm connecting from the float to the float valve.

When the engine is running the suction of the piston draws the gasoline into the mixing chamber (No. 4). If engine is idling, enough air enters through the initial air inlet (No. 7) to mix with the gasoline passing from the spray nozzle, thus giving a good mixture for idling.



CARBURETOR CONSTRUCTION.

1—Float. 2—Float valve. 3—Float chamber. 4—Mixing chamber. 5—Drain cock. 6—Gasoline adjusting screw. 7—Initial air inlet. 8—Auxiliary air valve. 9—Auxiliary air adjuster. 10—Throttle. 11—Spray nozzle. 12—Gasoline feed pipe.

When engine speed is increased the auxiliary air valve opens to admit more air and to prevent the mixture from becoming too rich.

To put carburetor in condition to start when cranked, close auxiliary air valve (No. 8) by screwing air adjuster (No. 9) in, then screw gasoline adjusting screw (No. 6) in until seated, then screw out from ¾ to 1½ turns, according to size of engine. Crank engine, close throttle (No. 10) and retard the spark, and adjust for idling by gasoline adjusting screw until engine runs best. Open throttle and advance spark, and adjust for high speed by means of air adjuster (No. 9). If mixture is too rich, screw out to weaken spring, admitting more air. If too lean, screw in, admitting less air.

Carburetors may differ in appearance, but they all are practically the same in principle.

PISTON RING TROUBLES.

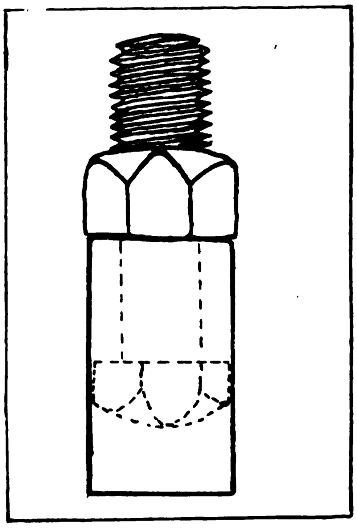
Piston rings may be worn so they fit loose in the groove, or they may be gummed up with carbon or oil so they do not move freely in their slots. The rings might work around so the slots are in line, or become broken. They also may lose all elasticity and not make a tight seal. They should be cleaned or replaced with new rings, according to the trouble.

Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

JACK FOR SMALL SPACE.

A small jack is very useful in many cases when a large jack cannot be used on account of close working quarters. A small jack, as illustrated is made easily and is inexpensive. It can be made any size or length by taking a small piece of pipe and a bolt with a head just large enough to slip into the pipe without allowing it to turn. Next place a nut on the bolt, large enough to rest on the top of the pipe. If the nut is too small to rest on the pipe, place a large washer under it. The jack then will rest on the lower end of the pipe and the end of the bolt against the part to be lifted. By running the nut down on the bolt it will raise the bolt, lifting the part against which the end is resting. If a longer jack is needed use a longer piece of pipe and bolt. By having a few pieces of pipe of different lengths on hand you can assemble a jack for any job. This little tool has tremendous lifting power. It also can be used as a spreader when needed for that job. By adding a bar with a hook in the center it also can be used as a gear puller.



A JACK FOR CLOSE QUARTERS.

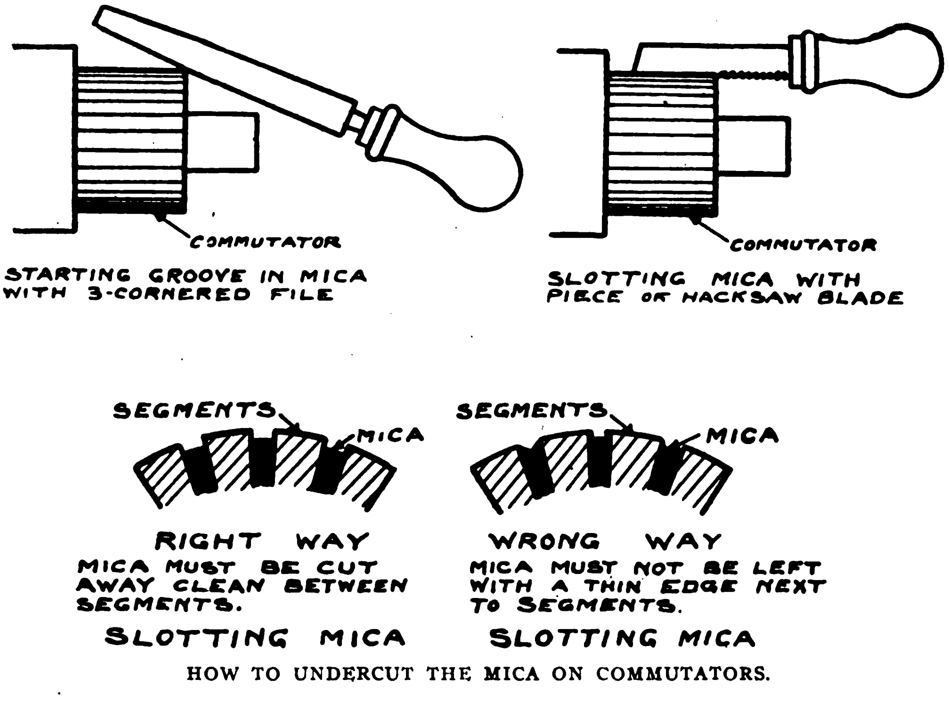
UNDERCUTTING COMMUTATOR MICA.

The copper bars on the generator commutator will wear in time, and when they have worn until they are flush with the mica insulation between them, there will be excessive arcing at the brushes, which in turn will cause the copper to be burned away until it is level or below the surface of the mica. This condition can be found upon inspection as the copper bars assume a rusty black color, due to this arcing.

To undercut the mica, first remove the armature from the generator and place in the lathe, and take a cut of the commutator. This cut should be just enough to make it concentric. When commutator is true you are ready to undercut the mica. This can be done as shown in the illustration. Take a hacksaw blade and grind the sides of the teeth off until it will cut a slot slightly wider than the mica. In this way a rectangular slot, free from mica and about 1/32 inch deep, is obtained between commutator bars.

After undercutting the mica the edges of these slots should be beveled very slightly with a three-cornered file, to prevent burrs remaining, which would cause excessive brush wear. This method of undercutting mica puts the commutator in good condition. The illustration will show how these slots should look when finished.

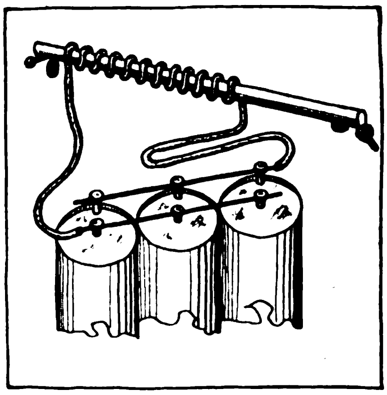
It must not be assumed that all burning and blackening of the commutator is caused by high mica. Any one of the following conditions would cause this trouble: Generator brushes of improper size or material; insufficient spring tension on brushes; overloading generator; an open or short circuit in windings.


COMMUTATOR
STARTING GROOVE IN MICA WITH 3-CORNERED FILE
COMMUTATOR
SLOTTING MICA WITH PIECE OF HACKSAW BLADE
SEGMENTS
MICA
RIGHT WAY
MICA MUST BE CUT AWAY CLEAN BETWEEN SEGMENTS.
SLOTTING MICA
SEGMENTS
MICA
WRONG WAY
MICA MUST NOT BE LEFT WITH A THIN EDGE NEXT TO SEGMENTS.
SLOTTING MICA

HOW TO UNDERCUT THE MICA ON COMMUTATORS.

A HANDY SHOP TOOL.

A great many times bolts and nuts are dropped into the crankcase or some other part of the engine, and it is necessary to take it apart to get the piece out. Around a soft iron rod, wind some insulated copper wire and connect the ends of the wire to a battery. When the current from the battery is passed through the winding the bar will become strongly magnetized, as shown in the illustration. By winding the wire the full length of a long iron rod one can make a small electro magnet, with which it is easy to reach into the crankcase or other part of the engine and, by running the current through the winding, magnetize the rod. By moving the end around in the case, any piece of iron or steel which might have dropped into the case will be attracted to the end of the rod and can be lifted out. This little magnet is inexpensive to make and will at times save many hours which would be required to remove a crankcase or other part of the engine. Be very careful not to wear a watch when handling an electro magnet or it will become magnetized and will not keep time until it is demagnetized.



ELECTRO MAGNET FOR THE SHOP.

TO SOFTEN STEEL.

To soften steel, place a quantity of air slacked lime in a box, heat the steel to a dull red, clean off all scale, put in lime and completely cover it with the lime. Cover the box over and leave it until cold. The more lime and the larger the box the better. This will take the hardness from any steel, making it very soft and easy to work.

ACID FOR ELECTROLYTE.

In preparing electrolytes for storage batteries, nothing but chemically pure sulphuric acid and distilled water should be used. Commercial grades of acid and ordinary drinking water contain enough metallic impurities to cause disintegration of the active material, including sulphating and ruining the battery in short order.

NUT-LOCKING TIP.

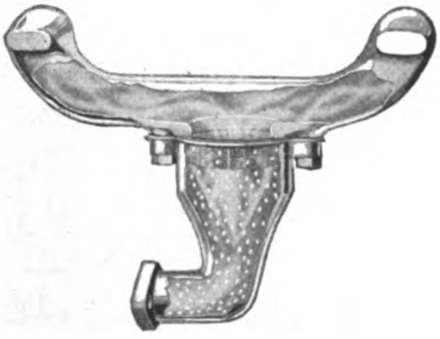
To lock a nut securely, have the bolt a little longer than is needed, and then rivet the projecting end a little after the nut is screwed in place. When the nut is to be removed, file out the rivet part.

New Things in the Accessories Field

BEN-WAT VAPORIZER.

J. W. Richardson Foundry & Metals Corp., 11 Broadway, New York City, guarantees for the Ben-Wat vaporizer for Ford cars that it will save 25 per cent in gasoline costs, and that some Ford car users are saving up to 61 per cent. The company acquired the patent rights to the Ben-Wat after severe and prolonged service tests on its own fleet of Ford cars. At present only a Ford car model is ready for distribution, although eventually the company will be equipped to manufacture models for all makes of cars and trucks.

The Ben-Wat vaporizer is built on the basic idea of the steam turbine, the only difference being that while in the steam turbine the blades revolve, the Ben-Wat has the blades riveted in place. Gasoline is forced to whirl through spaces between blades with cyclonic force, and any liquid particles are caught by the blades and completely vaporized by the whirling air. The gas vapor continues to whirl through the hot upper chamber, where it is preheated to almost the combustion point into the cylinder. Tests of the Ben-Wat are said to have demonstrated that it absolutely prevents liquid gasoline from entering the cylinder. . The housing of the vaporizer is aluminum and the nest of turbine blades is of brass, which will not rust or corrode from gas. It will not clog, it is said, as anything that passes the needle valves of the carburetor will pass easily through the blades.



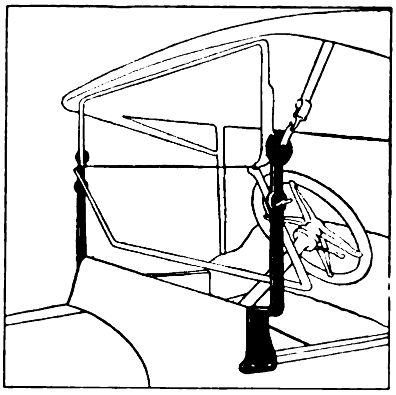
BEN-WAT VAPORIZER.

MARCUS CO. HAS VARIED LINE.

Harry Marcus Co., Los Angeles, acting as representative between factory and automotive jobber, now is distributor of Motor Mica, a chatter-removing compound for Ford transmission bands, Billmont and Plomb wrenches, Norwegian brake lining, and wiring assemblies. The concern moved recently to a new location, 1216 West Pico St.

BUCKSTAFF BREEZE BRACKETS.

Buckstaff breeze brackets make possible the opening of the lower windshield, to direct a stream of air into the Ford's torrid zone—the driver's compartment back of the engine—on a summer's day. The bracket is a stout, workmanlike job. It fastens to the body in the same way as the standard Ford bracket, using the same bolt holes, and requires but a few minutes to install. It is finished in black enamel. The windshield hinges in a slot in the bracket and is easily adjustable with wing nuts. Jobbers and retailers may obtain complete information, prices and discounts by writing the Buckstaff Breeze Bracket Co., 817 O St., Lincoln, Neb.

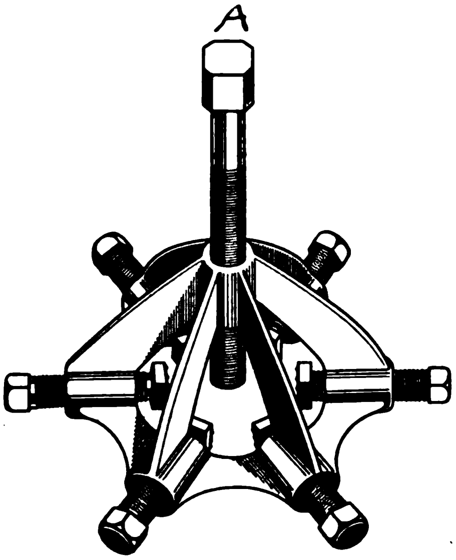


BUCKSTAFF BREEZE BRACKET.

KIMKIN WHEEL PULLER.

The Kimkin Universal wheel puller is manufactured by Kimmerle Bros., 683 Golden Gate Ave., San Francisco, to pull off and dismount any automobile wheel, whether wood, wire, or disc, with hub threaded or smooth. Referring to the illustration, the six side bolts, or dogs, are screwed up to grip the wheel hub loosely, and the central screw is centered against the end of the axle. Central screw is turned a few times, and when the device is well centered this screw is turned down, giving strong pressure against the axle. Then a well directed hammer blow against the central bolt brings off the most badly rusted and tight fitting wheel to be found, it is claimed.

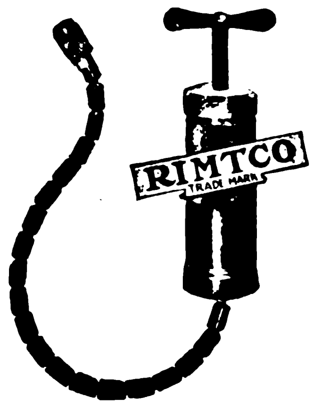
Body of device is of heat treated steel, and the dogs of case hardened steel. Threads on dogs are of such ratio as to grip the threads of any hub without jamming them, whatever the thread number or size of hub, up to 4½ inches in diameter. The device weighs 8 pounds, and is guaranteed as unbreakable. One man can operate it easily, obtaining tremendous direct pull with little effort. Price $9.50.



KIMKIN WHEEL PULLER.

RIMTCO LUBRICATOR.

The Rimtco lubricating system consists of the compressor, a 15 inch hose, a brass nozzle, and the ball check nipples which are installed on the bearing points of the car to replace the old grease and oil cups. Compressors are made in three sizes. The 4 inch size is for use on the average car; larger sizes are for lubricating several cars or trucks at a filling. The nozzle has a knurled outer sleeve, and inside, near the front, a recess into which the four balls in the hose fall when sleeve is pushed forward. Steel springs behind sleeve force nozzle back, and balls fit into groove and nipple, giving grease no chance whatever to leak out through lock when compressor is used, it is claimed. With knurled sleeve of nozzle pushed onto ball check nipple as far as possible and then released, handle of compressor is turned once or twice, producing a pressure of 500 pounds, enough to force old grease out and new grease in.



RIMTCO LUBRICATOR.

Ball check fitting are furnished by the manufacturer in more than 300 different types and sizes, and for cars already equipped with grease cup integral with shackle bolts the cap and nipple complete is supplied. Manufactured by Rimtco Lubricator Co., 739 Boylston St., Boston, Mass.

Remember the last time you were driving across the desert at dawn, and the perfume of the sagebrush?

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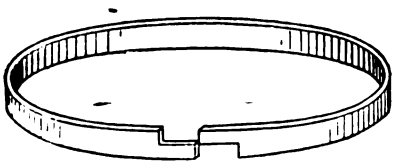
Quick service, right price and quality goods are always available from the distributors and manufacturers listed below—each a specialist in his respective line.



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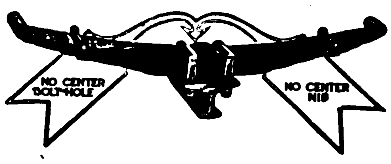

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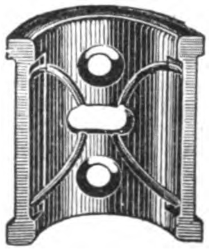

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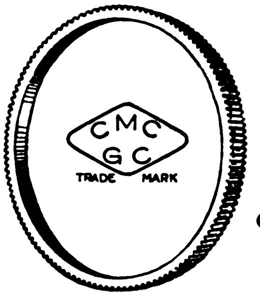

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AUTO GEAR CO.

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Automotive Gear Works
520 E. Pike St. Seattle

The King Bee Spark Plug

WILL FIRE PERFECTLY IN OIL PUMPING CYLINDERS

They Will Not Foul from Carbon
The Porcelains will never crack or break.
They give More Power—More Mileage.
Every Plug Guaranteed to Fire Perfectly for 1 Year.
Made in All Sizes for Pleasure Cars—Trucks—Tractors.
They Increase the Spark About 100 per cent.

Agents and Distributors Wanted.

King Bee Spark Plug Co.

1006 So. Hill St., Los Angeles
Telephone 15706

OFF'N'ON CHAINS.

Pyrene Mfg. Co., Inc., 17 East 49th St., New York City, with branches in Chicago, Kansas City, San Francisco and Atlanta, and prominent for many years as manufacturer of fire extinguishers and fire-safety accessories, now is sole selling agent for Off'N'On anti-skid chains.

Cross chains which are easily replaceable when worn, and which attach easily to any link of the side chain, are a very noticeable feature. Another strong point for both dealer and user is the sure-locking arrangement, which causes a snug fit of the whole chain assembly on each wheel, and prevents it dropping off.

Cross chains are of specially processed metal, unusually resistant to wear, but they can be replaced with new chains in a minute, when necessary. Each link of the side chains is "tied," not once, but twice, to give double strength, links cannot spread in service, and there are no sharp ends to bruise casings and collect dirt and mire.

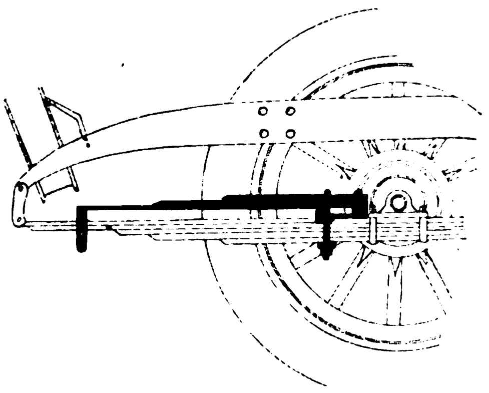
Every side chain link has a flat side, and on each cross chain end is a double ended hook, with the mouth of the hook just large enough to slip easily over the flat side of any side chain link. Extra chains are sold by the manufacturer as peace-of-mind insurance for the wet-weather motorist.

The locking arrangement at the ends of each side chain is a simple, positive, combination lock and tightener. As the top, working somewhat like a latch, is pushed down toward the notch, the chain ends are drawn together a full inch for a snug fit by leverage action. The first or second link on the other end of chain is slipped into notch, the clamp is dropped, and the whole is locked positively—but can be quickly unlocked again by easy thumb pressure.

STEEL WHEEL POINTS.

A series of exhaustive tests and comparisons by the Motor Wheel Corp., Lansing, Mich., has developed the fact that Gier Tuarc steel wheels, produced by this company, are lighter in the periphery than any wood automobile wheels with demountable rims, of corresponding size. The Gier Tuarc one-piece steel wheel design has now permitted an increase in wheel strength at the same time that peripheral weight has been reduced. Reduction in weight at the periphery, or "rim", adds perceptibly to tire life, quickens acceleration and has many other practical advantages.

Another exclusive Tuarc advantage is the depression around the valve stem hole in the disc, which allows quick, easy outside tire inflation even with the most cumbersome air hose nozzle. While Gier Tuarcs were the first steel wheels with direct outside valve stems, the effort at further improvement has never ceased, culminating in this latest betterment to overcome possible difficulty with the larger air nozzles found at some service stations.



A-B SHOCK ABSORBER.

The outside valve stem was first made possible by the Tuarc two-arc design and one-piece construction, which also permits the use of regulation demountable rims. Now that it has developed that Tuarcs also weigh less at the periphery than wood wheels, the Tuarc steel wheel is claimed to have the practical advantages peculiar to its own design and construction.

Increasing numbers of cars are being equipped with steel wheels at the factory. All models of the Rickenbacker have Gier Tuarc steel wheels as standard equipment. Oldsmobile and several other high grade sport models are leaving the factory with Gier Tuarcs as standard equipment. On other models of some makers Tuarcs are optional equipment.

The manufacturers using Tuarcs as standard equipment on one of more models also include Buick, Columbia, Gardner, Liberty, McLaughlin, Oakland, Packard, Paige, Reo and Westcott.

A-B SHOCK ABSORBERS.

The A-B shock absorber, manufactured by H. & N. Mfg. Co., 615 Eddy St., San Francisco, is designed to meet the demand for a low priced shock absorber which is simple in construction, but efficient under all conditions. A special advantage of these shock absorbers is the fact that they can be installed in 30 minutes, de not necessitate defacing the car frame, and require no service afterward. Also, they can be installed by the car owner himself. They are composed of a series of vanadium steel spring leaves, claimed to be perfect in tension, and scientifically balanced at points of application. They are mounted on the rear springs, yet do not interfere with the car's natural spring action. The manufacturer claims a record of universal satisfaction among the owners of the several thousand sets now in use.

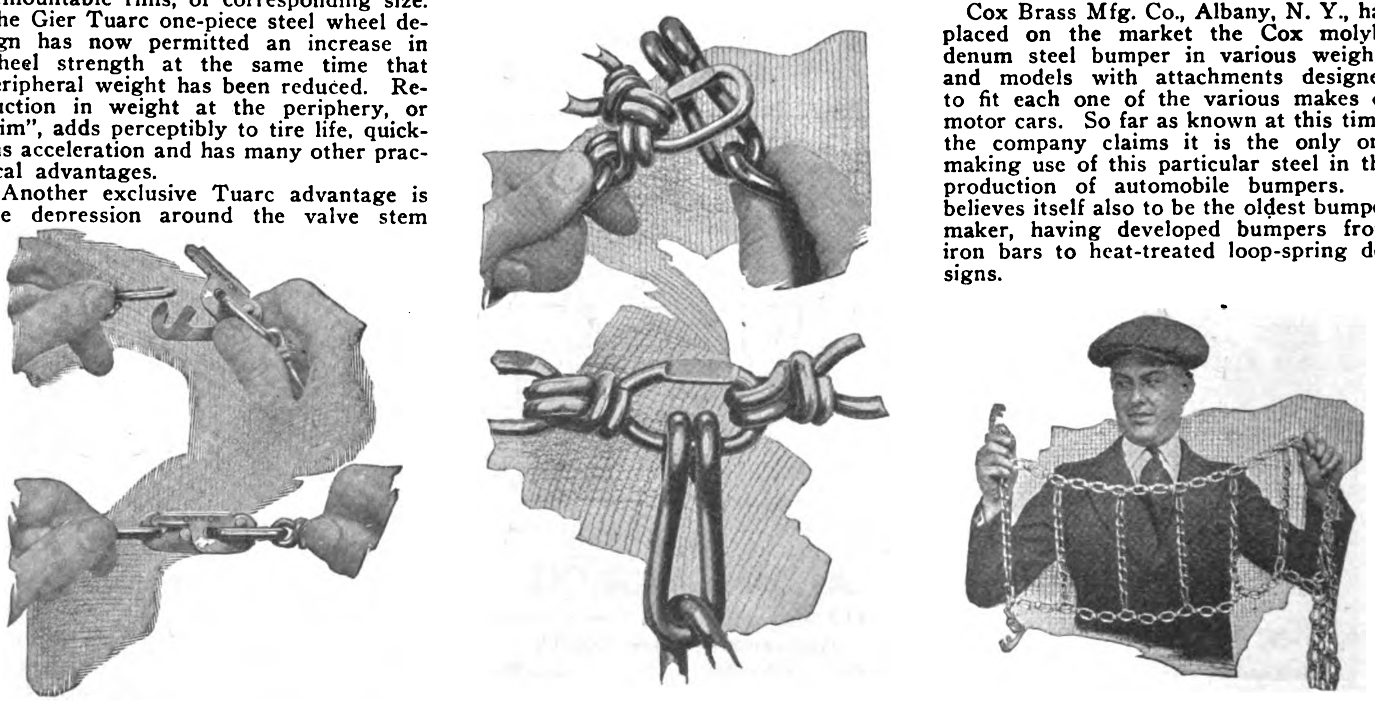
WARNER LIQUID SOLDER.

Warner-Patterson Co., Chicago, maker of the Patterson lens, has expanded its activities to include distribution of a large line of exclusive automobile accessories, according to A. P. Warner, vice president. The first of the new line of products to be announced is Warner liquid solder.

When leaks develop in radiator, water jacket and pump or water connections, they often are neglected because of the time necessary to make repairs and the loss of car usage. With Warner liquid solder leaks are mended by simply pouring the solution into the radiator. It quickly hunts out leaks and mends them without interfering with use of the car. The driver need not wait until a leak develops, but can put the compound in the radiator at any time, as he does alcohol and anti-freeze solution in winter. It does not interfere with circulation nor injure metal parts or rubber hose connections. Even breaks in water jackets, now mended by electric welding and other more costly processes, are corrected quickly.

MOLYBDENUM STEEL BUMPERS.

Cox Brass Mfg. Co., Albany, N. Y., has placed on the market the Cox molybdenum steel bumper in various weights and models with attachments designed to fit each one of the various makes of motor cars. So far as known at this time, the company claims it is the only one making use of this particular steel in the production of automobile bumpers. It believes itself also to be the oldest bumper maker, having developed bumpers from iron bars to heat-treated loop-spring designs.



OFF'N'ON CHAINS—LEFT, STURDY-LOOKING DEVICE. CENTER, ATTACHING CROSS CHAINS TO FLAT LINKS OF SIDE CHAINS. RIGHT, COMPLETE CHAIN READY FOR INSTALLATION.

JADSON'S
SUPERIOR MOTOR PRODUCTS
SUPERIOR ONE-PIECE STEEL
MOTOR VALVES

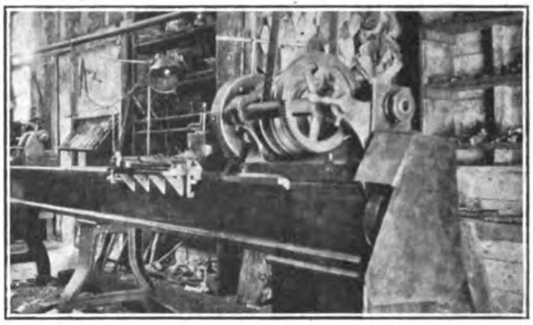
It's Easy to Sell
JADSON'S VALVES

Just show a JADSON to your customer. Let him see its sturdy one-piece construction—let him feel that wear and heat resisting texture of the tough chrome nickel steel that only hand-forging can give—let him note how perfectly it is machined. He'll not need to be an expert to see instantly that here is a valve that will not warp, scale, pit, break or burn out.

Make quick sales and permanent customers with JADSON'S ONE PIECE STEEL MOTOR VALVES

Manufactured by
J. A. DRAKE & SONS, Reedley, Calif.
Sales Department: Allied Industries, Inc.
San Francisco Seattle Los Angeles

Money Making Machinery



AMERICAN LATHES

Still going strong! After ten years of service this "American" still stands the gaff and regularly turns out the work at the Baldwin's Machine Shop, 331 Towne Ave.

Strength, quality and precision are built into every "American".

Full details on request.

Machinery, Industrial and Construction Equipment, Supplies
Exclusive Distributors
SMITH-BOOTH-USHER CO.

San Francisco
50-60 Fremont St.

Los Angeles
228 Central Ave.

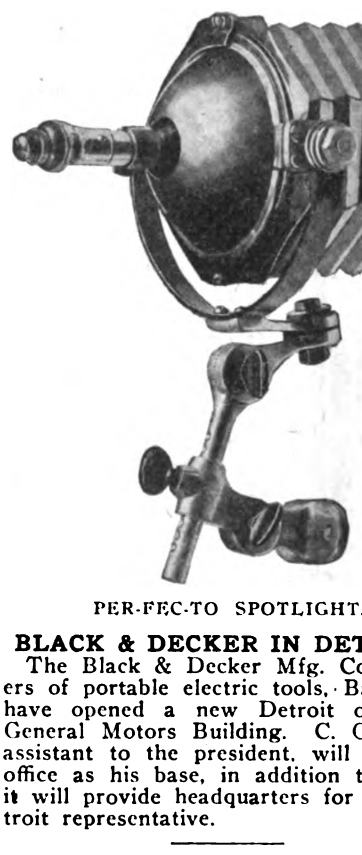
SPOTLIGHT FOR CLOSED CARS.

The Per-Fec-To Ray-Deflector spotlight is unique in being operated from the inside of the closed car. It is placed against the lower windshield, at the right of the steering wheel, ready at a second's notice for spotting sudden obstacles or road turnings. No glare or light falls on the windshield in a way to interfere with or obstruct the driver's vision along the beam of light thrown ahead, there is no side glare, and no annoyance to other drivers unless light is turned directly on them, it is claimed. Universal type bracket fits any style of windshield, be it slanting or straight. The 4½ inch size sells at $10; 5½ inch at $11. Manufactured by Reiber-Kolz Co., Adrian, Mich.

What's a minute, to stop, look and listen at a grade crossing, compared with eternity?

WEAVER
SAFETY
SERVICE CAN
5 GAL.

WEAVER SERVICE CAN.



PER-FEC-TO SPOTLIGHT.

BLACK & DECKER IN DETROIT.

The Black & Decker Mfg. Co., builders of portable electric tools, Baltimore, have opened a new Detroit office, in General Motors Building. C. G. Odell, assistant to the president, will use this office as his base, in addition to which it will provide headquarters for the Detroit representative.

The transmission should not be lubricated with a solid grease because the gears will merely cut a path in the grease and not all parts within the case will be lubricated.

WEAVER SERVICE CAN.

The Weaver safety service can is designed to be a quick, convenient and safe means of handling fuel and lubricants. The outfit includes a flexible steel hose that will reach any gas tank, no matter how obstructed by tires, or remotely located from easy access, and the need for special funnels is done away with. When the oil or gas is stored or transported, waste is prevented by inserting the tapered hose nozzle into the vent in the screw cap, making can practically airtight, and preventing evaporation, spilling or contamination. The fire danger in garages and service stations is much reduced by handling inflammable liquids in a sealed container of this kind. Capacity 5 gallons. Manufactured by Weaver Mfg. Co., Springfield, Ill.

Remember, trucks slow up slowly.

WEAVER SERVICE CAN IN OPERATION.

USE
EMSCO
BRAKE LINING
ITS DEPENDABLE

Insist on Emsco from your jobber

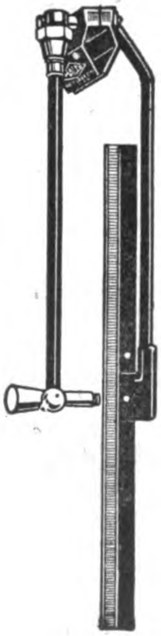
MADE BY
E. M. SMITH CO.
LOS ANGELES

MALCO 3-in-1 WINDSHIELD CLEANER

A BIG MONEY MAKER

One model fits any car—open or closed.

Can be installed in three different ways—it clamps anywhere on the windshield frame or through a hole in the frame.



JOBBERS AND DEALERS

Write today for price lists, descriptive folders and information about our sales-helps.

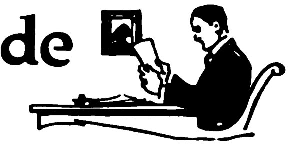
Retail $1.50 U. S. A.

MALCO

MALCO PRODUCTS CORPORATION

220-221-222 West So. Temple St. Salt Lake City

Western Trade Notes



San Diego, Cal.—Western Tire Sales Co., 1140 3rd St., has been changed to Herman B. Fischer Co., headed by H. B. Fischer.—Welstead Oil Co., 756 Front St., has taken county distribution of Sinclair oils.

La Mesa, Cal.—L. C. Gordon has sold Service Garage to Arnold & Bradbury.—T. W. Wells has bought the interest of his partner, K. K. Little, in La Mesa Garage.

Escondido, Cal.—Guarantee Garage is doubling the space of its battery department and office rooms, and will make other additions when the new Ford Garage, adjoining, which it will occupy, is completed.

Laguna Beach, Cal.—New Service Garage has been occupied by Allen G. Phelps, who has 5700 square feet for his garage business.

Santa Ana, Cal.—Townsend & Medbury, Hudson and Essex dealers, have bought ground at 6th and Broadway for $49,000 and will build a sales and garage building.—Edgar & Kays, Oakland and Paige agency, have bought Charles L. Davis Garage, 6th and Broadway.—Charles L. Davis has removed his Marmon agency to 410-12 W. 5th St.

Anaheim, Cal.—C. H. Myres has bought Stanley Buick Garage from H. W. Stanley, changing it to Myres Garage and will specialize on Buick and Studebaker repairing.

Whittier, Cal.—H. H. Overholtzer has formed Hydro-Toron Sales Co., 120 Greenleaf Ave., handling Hydro-Toron tires.

La Habra, Cal.—W. E. Barmore has bought a half interest in A1 Tire & Repair Shop.

Covina, Cal.—C. H. Howard Vulcanizing Shop has been bought by E. D. Johnson, changing it to Johnson Vulcanizing Shop.—W. C. Walker has bought Motor Service Garage and Repair Co. from H. C. Bezdechek, who retains space for his accessory business.

Ontario, Cal.—O. K. Garage has been sold by Ray Smith and Ralph Shaw to Lee Kreemer and Jack Dorrity.—A. E. Johnston Auto Style Shop has opened in its fine 2-story building on West B St., with 10,000 square feet of floor space for automobile repair, and body and top repairing and manufacturing.—Howard S. Bunting & Co., Chalmers agency, have added the Wills Sainte Claire car.

San Bernardino, Cal.—Coast Tire Sales Co., 772 3rd St., has been opened by C. E. Eldridge and C. R. Summerson to handle Coast tires.

Cucamonga, Cal.—E. R. Stafford of Stafford Garage has placed it in charge of his son, E. S. Stafford, and has opened Sycamores Service Station & Garage at Foothill Blvd. and 10th St.

Chino, Cal.—Rose & Fryer have taken the Chevrolet agency.

Fontana, Cal.—H. E. Spring and Harry H. Miller, forming Fontana Service Co., incorporated for $25,000, have taken over Fontana Garage.

Riverside, Cal.—Hickey Overland Co., Overland and Willys-Knight agency, has moved to Crossley Garage, Main and 11th Sts.

Idyllwild, Cal.—L. A. Willson has opened Willson's Garage here.

Coachella, Cal.—Fred H. Myers has sold his battery station to J. H. Taylor and H. L. Pax.

King City, Cal.—Salinas Valley Garage has been opened in Novelty Theater Bldg. by F. Rainey and J. Gardner.

Watsonville, Cal.—J. Seitz has bought Harlan Auto Electric Shop on Main St. from C. A. Harlan.

Santa Cruz, Cal.—Bert Normand has taken the Santa Cruz agency for Samson trucks and tractors and has leased a new garage, Mission and Vine Sts.

Pendleton, Ore.—The Oldsmobile agency for Umatilla County, has been taken by Peterson Brothers Garage.—Simpson Auto Co. has been formed with $50,000 capital stock by J. H. Sturgis, Robert Simpson, J. A. Fee, Jr.

Baker City, Ore.—Welling & Sons Garage has taken the Franklin car agency.

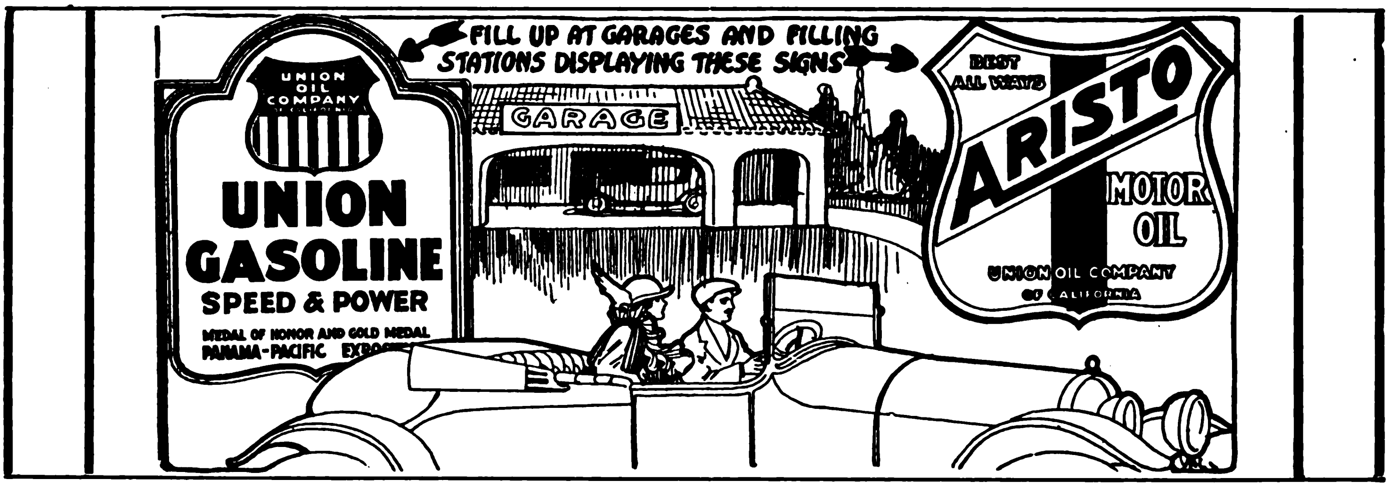
Boardman, Ore.—M. L. Morgan of Boardman Garage Co. has bought the garage and shop while Macumber Brothers, his former partners, continue their school bus contract.

Ashland, Ore.—J. K. McWilliams, Ford dealer, has formed a separate agency to handle Studebaker cars.

Eugene, Ore.—Fifth Ave. Garage has taken the Standard Eight car agency.

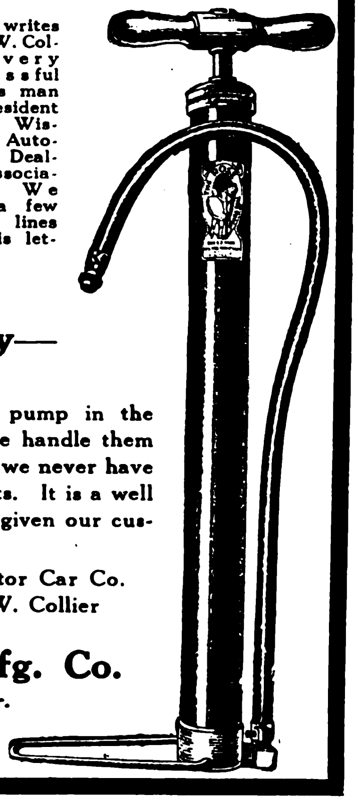
Los Angeles, Cal.—H. N. Landon, 306 W. Pico St., is manufacturing the Beterbilt storage battery.

Long Beach, Cal.—Charles J. Weaver, Paige dealer, has moved to a new garage and service station, 3720 American Ave.


FILL UP AT GARAGES AND FILLING STATIONS DISPLAYING THESE SIGNS
UNION OIL COMPANY
UNION GASOLINE
SPEED & POWER
MEDAL OF HONOR AND GOLD MEDAL PANAMA-PACIFIC EXPO
GARAGE
BEST ALL WAYS
ARISTO
MOTOR OIL
UNION OIL COMPANY OF CALIFORNIA

"WE HANDLE ROSE PUMPS EXCLUSIVELY"

Thus writes Mr. C. W. Collier, a very successful business man and president of the Wisconsin Automobile Dealers' Association. We quote a few pointed lines from his letter:—



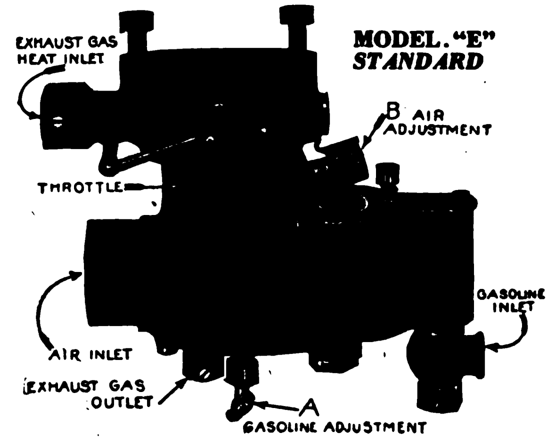
And This Is Why—

Gentlemen:—

We know of no better pump in the country than the Rose. We handle them exclusively, mainly because we never have any trouble with adjustments. It is a well built pump and has always given our customers entire satisfaction.

Fox River Motor Car Co.
(Signed.) C. W. Collier

Frank Rose Mfg. Co.
Hastings, Nebr.


EXHAUST GAS HEAT INLET
B AIR ADJUSTMENT
THROTTLE
GASOLINE INLET
AIR INLET
EXHAUST GAS OUTLET
A
GASOLINE ADJUSTMENT

MODEL "E"
STANDARD

MARVEL CARBURETORS

GIVE

Universal Satisfaction

POWERFUL— ECONOMICAL— SIMPLE—

Write for our new Catalogue

MARVEL CARBURETOR CO.
FLINT, MICHIGAN, U. S. A.

Distributors:

Marvel Carburetor Sales Co., 1837 So. Flower St., Los Angeles, Cal.	McAlpine & Schreiner 1520 Tenth Ave., Seattle, Wash.

Edwards-Warden Motor Parts Co.,
Salt Lake City, Utah

A Complete Line of Sixes and Fours for 1922

When Better Automobiles Are Built Buick Will Build Them

AUTHORIZED VALVE-IN-HEAD Buick MOTOR CARS SERVICE

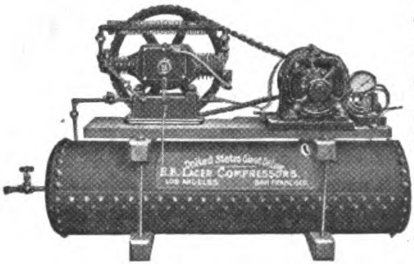
BUICK

Ordinary Plug
Two Plug Ignition
SU-DIG Plug
To ... system

MORE POWER
GREATER MILEAGE

DO YOU UNDERSTAND TWO PLUG IGNITION—the system that ignites the gas at two opposed points at once? This burns the mixture completely and almost instantly; increases power and gasoline mileage; saves fuel and lessens carbon accumulation and spark manipulation. SU-DIG Series Spark Plugs added to the plugs now in your engine, give Two Plug Ignition. A wonderful improvement in the running of your car. No change in present system required. Write for booklet, "How to Get More Power." If your dealer does not handle SU-DIG Series Plugs, write Chanslor & Lyon Co., S. F., L. A., Fresno, Oakland, Seattle, Portland. McCoy Motor Supply Co., San Francisco, Los Angeles, Superior Motor Power Co., 77-A Spring St., N. Y.

SU-DIG



The same reliable U. S. Compressors.

Reliable 10 years ago.

More reliable Today.

Many copies appear in the market but only one original.
The best with patented features

E. B. LACER

Air Compressors — Electric Motors

Los Angeles
1224 East 8th St.

San Francisco, Cal.
401 Van Ness Ave.

SMOOTH-ON IRON CEMENTS

No More Expensive Repair Bills

SMOOTH-ON
for Leaky Radiators

With Smooth-On Iron Cement No. 1, you can repair leaks in radiators, radiator edges, etc., both on honeycomb and tubular types, from the outside, without removing the radiator, at a few cents' cost.

Write for booklet, "How to Repair Motor Radiators"—it will show you how to make radiator repairs and other repairs around cars easily, quickly, and economically—it's FREE. Smooth-On comes in 6-ounce, 1-pound, and 5-pound tins. Also in larger sizes.

Dealer: Write for particulars on this live proposition.

SMOOTH-ON MFG. CO.
Dept. 37-E Jersey City, N. J. U.S.A.

—something new—

OUR
Percentage of "Come-Backs" is less than 3%.
Exchange service is of 95% efficiency.
Stock is the largest of its kind in the world.
Workmanship and materials cannot be excelled.

We Rewind AND REBUILD Armatures

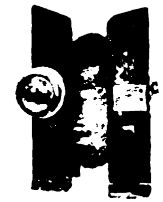
For Automobile Starters and Generators

2-Year Guarantee

Write for Price List
and Discount

Dynamo-Electric Wks.

2315-17 S. Grand Los Angeles, California



Armature Tester
Ten Dollars Net

MOTOR WEST

Reaches a larger percentage of dealers and repairmen than any automotive trade publication circulated on the

PACIFIC COAST

San Francisco, Cal.—Westwood Battery Station, Exide battery service agency for the district west of Twin Peaks, has been opened at Ocean Ave. and Jules St. by Felix Eichler and C. R. Frost.—Superior Tire & Repair Co., 1650 Pine St., has become Lancaster tire distributor.—Mac-Dry Battery Co., 987 Post St., has taken the Mac-Dry storage battery agency for Northern California.—Petry & Brandt, 1625 Pacific Ave., have been made official Apperson service agents in Northern California.—John P. Costello has withdrawn from the partnership of Costello-Ritchie Co. and has opened his own tire business, 854 Ellis St.—G. E. Bridges has bought Crowe Glass Co., manufacturer of sun and rain visors, from J. B. Crowe.

Richmond, Cal.—Richmond Mfg. Co., incorporated for $20,000 by Lou W. Schroeder, H. A. Stiver, and others, has opened at 12th St. and Macdonald Ave. to manufacture automobile tops and leather novelties.

Alameda Cal.—A $20,000 building will be erected by Chaplin Motor Sales Co. on a 10,000 square foot tract bought by it adjoining its present quarters, and will have office, show room, machine shop and garage.

Morgan Hill, Cal.—F. M. Brown has bought the Morgan Hill Garage from K. H. McCool.

San Jose, Cal.—J. E. Sloan, Buick agent, has opened in his new garage, one of the largest in the vicinity of San Francisco, at 1st and Williams Sts.

Stockton, Cal.—Sutter Auto Electric Co. on North Sutter St. has taken the Gill storage battery agency for the county.

Lodi, Cal.—Arnold Boether has occupied his new building on South Sacramento St., 60x140 feet, where he has one of the largest repair shops in the Stockton vicinity.

Riverbank, Cal.—A. F. Perrin and Orin McMath have opened Perrin & McMath Garage.

Salida, Cal.—F. C. Dale is now owner of Salida Garage, Willys-Knight and Overland agency.

Oakdale, Cal.—Calaveras Garage has been opened in Rodden Bldg. on East Railroad Ave. by M. E. Crosby.

Madera, Cal.—Daniels & Whitehouse have taken the Gill battery agency for Madera County.

Fresno, Cal.—Hercules Tractor Co. has been incorporated here with $1,000,000 capital stock by D. R. Pelton, J. B. Daly, J. H. Fickel, and others, to manufacture Hercules farm tractors.—M. G. Odenheimer and W. Lehmann have opened Fresno Enameling Co., 2131 S. Van Ness Ave., to specialize in automobile body enameling.—The branch of Goodyear Tire & Rubber Co. of California has been moved from Inyo St. to 1822-24 Los Angeles St.—Lionel D. Hargis has formed L. D. Hargis Co. and will handle Mack trucks and Utility trailers for the entire San Joaquin Valley.

Porterville, Cal.—A. F. Kessing and A. J. Hubert have opened Porterville Machine Works, capitalized at $50,000, to do cylinder grinding and general machine work.

Tulare, Cal.—Leo A. Smith, former Chevrolet agent here, has bought Midway Garage from C. S. Nicewonger and R. D. Helm, and will add a car agency.

Delano, Cal.—Billzack Repair Shop has been opened on the state highway by William Atkinson and Zach Squires.

Bakersfield, Cal.—O. R. Welsh has been made sales and service manager of Auto Electric & Battery Co., 221 I St., which is now a state testing station for automobile headlights.

Taft.—Cal.—William Chessbrough has sold his automobile top shop to Wright & Adams.

Burlingame, Cal.—Bogart & Brouchard, San Mateo County agency for Chevrolet cars, has leased a new garage being erected on Burlingame Ave.

Watsonville, Cal.—Dealers here will hold a summer automobile show, August 12-15, in charge of J. S. Martin, in the redwood Civic Auditorium.

Clovis, N. M.—Jimmy Graham has opened Quick Tire Service on East Monroe St., handling Goodyear tires.

Las Cruces, N. M.—A Ford car race for stock cars, with a $10 entry fee, will be staged here July 4.

Patagonia, Ariz.—East Side Garage, owned by R. C. Blabon, has taken over American Garage.

St. Johns, Ariz.—St. Johns Garage has been leased by Hugh Richey.

Chandler, Ariz.—C. M. Wilson & Co., Ford agency, has occupied the former Bill Brooks Service Station.

Nogales, Ariz.—Wm. H. Davey Co., 354 Grand Ave., has taken the Chevrolet agency.

Ely, Nev.—Earl Bath has bought the vulcanizing department of Lincoln Highway Garage and will operate his own business on Aultman St.

Reno, Nev.—W. Clay and G. A. Leach have taken over Dorris Garage, 242 Chestnut St.

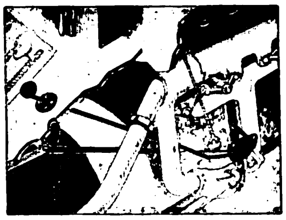
Sandpoint, Ida.—W. J. MacDonald of MacDonald's Garage has bought Fred Reem's interest in F. F. Reem Motor Co.; Reem will specialize henceforth in used car sales.

BALL BEARINGS REGROUND

Immediate exchange on all sizes and types.
Distributors Hess-Bright New Bearings.

Ahlberg Bearing Company
1708 S. Grand
Los Angeles, Cal.
Portland San Francisco

The EWALD
FOOT ACCELERATOR FOR FORD CARS



Every Ford Owner needs a Foot-Accelerator. Safe driving demands it. Needs only to be seen to be sold, and any dealer who fails to show an EWALD ACCELERATOR where his trade will see it, is wasting golden opportunities for easy sales and satisfactory profits.

The Ewald is unaffected by road jolts and jars.

Dealers and Jobbers—Write our sales dept. today for full details

Manufacturers
Romort Mfg. Co.
Oakfield, Wis.

Price 75c

Sales Dept.
THE ZINKE CO.
1327 Michigan Ave.
Chicago, Illinois

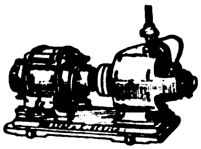
DRAKE LOCK-NUTS

"Never Jar Loose"

SPECIFY ON UPKEEP AND NEW EQUIPMENT
USED BY BEST MANUFACTURERS
WRITE FOR SAMPLE
DRAKE LOCK-NUT CO.
PLANTS: CLEVELAND SAN FRANCISCO

BETERBILT BATTERIES

There is a big demand for this efficient, low priced battery. We can make dealers an interesting proposition. Write for details.



BATTERY CHARGING MOTOR GENERATOR

Distributors for Delco, Klaxon, Remy and Black & Decker products. Rewinding, Starting, Lighting and Ignition Experts. Batteries Re-charged. Manufacturers of Radio Equipment.

H. N. LANDON ELECTRIC CO.
"Everything Electrical"
306 W. Pico St. Phone 641-15. Los Angeles, Calif.

SINGER PROCESS PISTON PINS

We Carry a Larger Stock of Pins than Any Exclusive Piston Pin Manufacturer in the United States

We Manufacture Piston Pins for all Makes Automobiles, Trucks and Tractors

Unequaled for quality. 200,000 in stock, ready for shipment to any point. Full particulars, prices and discounts mailed on request.

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2116 So. Los Angeles St. Los Angeles, Calif.

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STEPHENS
Salient Six

IT'S A GREAT CAR!

Now $1595 f. o. b. Freeport

STEPHENS MOTOR WORKS · FREEPORT, ILLINOIS

Look inside
for the name

BELUXE
LIGHT WEIGHT CAST IRON PISTON
"The Successful Light Weight Piston" ©

See the reinforcing ribs running ACROSS THE HEAD to a reinforcing ring.

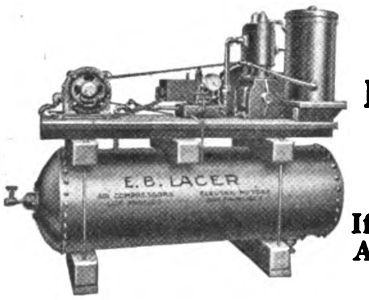
CLARK-TURNER PISTON CO.
Los Angeles, Cal.

MORELAND MOTOR TRUCKS

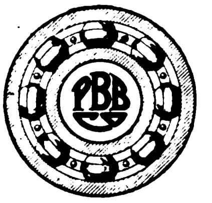
Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

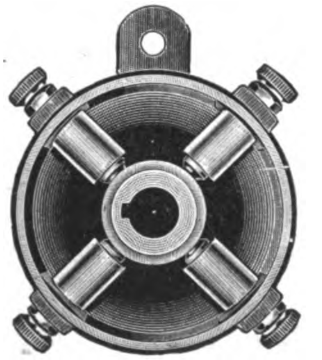
MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA
BEST FOR THE WEST



High Pressures Big Volumes
IS THE CALL TODAY
If it is Compressed Air 1 to 80 cu. ft. of air per min.
See E. B. LACER
Air Compressors Electric Motors
Los Angeles San Francisco, Cal.
1224 East 8th St. 401 Van Ness Ave.



BALL BEARINGS REGROUND
Large stock of all standard sizes on hand for immediate exchange.
Special Bearings Made to Order
Factory Distributors for New
FAFNIR BALL BEARINGS
BOWER ROLLER BEARINGS
PACIFIC BALL BEARING CO.
415 West Pico St. Los Angeles, Cal.



DALECO
Trade Mark Registered
TIMER FOR FORD CARS
Not merely a timer, but perfect timer service guaranteed for a period of 2 years and at 50 cents per year thereafter.
Write our sales department today for full details
Manufacturers
The Dale Mfg. Co.
1323 Michigan Ave., Chicago
Sales Department
The Zinke Company
1327 Michigan Ave., Chicago

NEW ERA BUMPERS
Front and Rear The Same Price
NEW ERA Duplex Bumper Strikingly Beautiful
Many bumpers cost more for rear. NEW ERAS are the same price front and rear and fit more cars with rears. NEW ERA prices are lower than that of most high-grade bumpers. In strength and beauty they have no peers. Live accessory dealers can do a good business with our Standard and Duplex Bumpers. Write for new illustrated bumper catalog.
NEW ERA SPRING & SPECIALTY CO.
73 Cottage Grove Ave. Grand Rapids, Mich.
GRAF SALES CO., Williams Bldg., San Francisco, Calif.

Portland, Ore.—Liberty Garage, 125 14th St., has been opened by K. C. and J. C. Henderson in a new $30,000 building.—E. E. Britigan has opened Universal Auto Parts Co., 191 13th St., handling replacement parts nd accessories; he was formerly with the Mercer and S. G. V. factories.

Salem, Ore.—Western Auto Supply Co. has opened a store, 125 N. High St., G. L. Finnegan manager.

Oregon City, Ore.—Hodgson-Cannon Electric Co. has been opened at 4th and Main Sts. as Clackamas County dealer for Westinghouse batteries.

Roseburg, Ore.—C. O. Thomas has moved Overland Garage to a new building on Main St. and has changed the name to Central Garage.

Lents, Ore.—Herbert Orton and Jack Pitzer have opened Red Top Battery & Electric Service Co. on Foster Road, handling Gould and Multnomah batteries.

Wallowa, Ore.—MacCrae & McElroy have opened a garage and repair shop in Rounsavelle & Marvin Bldg., carrying a line of Ford and Maxwell parts.

Ontario, Ore.—Ben Jones has bought Carter Garage from C. C. Carter for $30,000.

Ashland, Ore.—Class A Garage has taken the Maxwell agency.

Eureka, Cal.—Carrico & Son, 617 7th St., have taken the Rickenbacker car for Humboldt County.

Healdsburg, Cal.—James Shinn and J. R. Butler have bought Wm. D. Mitchell Vulcanizing Shop and will change it to a battery and ignition repair shop.

Yreka, Cal.—Siskiyou Motor Co., O. M. Cloyd manager, has taken the Durant agency.

Roseville, Cal.—Horton & Luck have taken over the Willys-Knight and Overland agencies from Placer County Auto Co., and have occupied large space in the Busby Bldg., retaining their name of Superior Garage; Placer County Auto Co. retains the Hydro-Toron tire agency, now held for 11 counties.—Olsson & Nelson have opened a Willard battery service station on Atlantic St.

Placerville, Cal.—Charles J. Ruplye has bought August Ebbert's interest in Placerville Garage, and will handle Buick and Chevrolet cars.

San Bernardino, Cal.—E. M. Thompson, formerly with Hicks & Thompson Motor Co., Dort agency at Riverside, has taken the Dort for San Bernardino County, opening at 733 3rd St.—Perry H. Green, former outside shop manager for Motor Transit Co., Los Angeles, has returned to this country, buying the tire and accessory store of J. H. Eddy.

Glendale, Cal.—The Glendale Automobile Dealers' Association has been organized, including 15 dealers and representing investment of more than $500,000, and will work actively for an automobile show in near future.—Western Auto Supply Co. has opened a store at 205 S. Brand Blvd.—Monarch Auto Supply Co. will erect a 2 story garage, costing $50,000, Harvard and Brand Blvds.

Fresno, Cal.—Van Ness Battery Works, Gill battery distributor for Fresno and Madera Counties, has moved to new quarters, 2021 Stanislaus St.

Colusa, Cal.—Universal Garage, operated by Westcamp & Stowe, has taken the county agency for Mac-Dry storage batteries.—F. E. Craig has opened Craig's Garage, 6th and Jay St., and will handle a car agency.

Petaluma, Cal.—A. Guy and H. Eicher have opened an automobile electric repair shop and U. S. L. battery service station.—Guglielmetti Bros., automobile dealers and general electric supplies and implement handlers, have leased larger quarters, 172 Main St.—E. E. Dodge has bought half interest in Independent Auto Supply Co. on Western Ave. from F. J. Cole.—F. Jason has opened with the Paige agency in McNear Bldg. on Fourth St.

Sebastopol, Cal.—Sebastopol Battery Shop has been made Willard battery service station here.

Napa, Cal.—E. J. Sparks has bought the Chevrolet agency from W. C. Abbott Co., taking over their quarters, 115 3rd St.

San Rafael, Cal.—West End Repair Shop has been opened at Fourth and F. Sts.

St. Helena, Cal.—R. L. Merrill and T. M. Freeman have opened at Randolph and 3rd Sts., with the Chandler and Cleveland agencies.

Devoy, Cal.—A. E. Look has opened Look's Garage & Service Station here.

Susanville, Cal.—W. N. Look, former manager of Sierra Auto Supply Co., has taken the Buick car agency.

Yreka, Cal.—Grant and Wallace Martin have leased the machine shop of Travelors' Garage and will operate it as a separate concern.—Siskiyou Motor Co., O. M. Cloyd, manager, has opened a Durant agency.

Chico, Cal.—Deveney & Enloe have bought the Buick agency here from W. R. Gwynn and have a sales room at 4th and Main Sts.—Vernon and Gail Moore have opened in Byrne & Byrne Garage with the Maxwell agency.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON RINGS PISTON RINGS

OIL KING PISTON RINGS

JOBBERS and DISTRIBUTORS
Ask Us Why You Should Sell
OIL KING PISTON RINGS
DYGERT & SIEMERS
Chamber of Commerce Bldg
Los Angeles, Cal.

Complete Satisfaction Guaranteed above all other Oil Rings

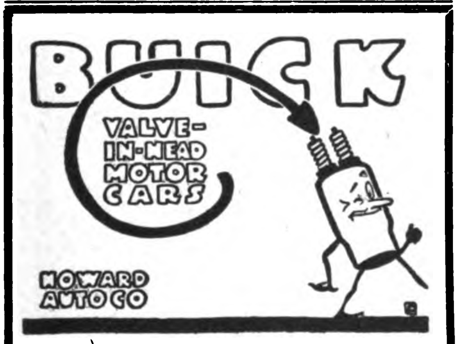
SPRINGS

CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS

"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof

FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
Pacific Coast Distributors
Madison "Oil Kipps"
Main 3733. 916 So. Los Angeles St.

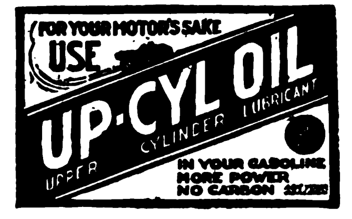
AUTOMOBILES



1323 S. Flower St. Los Angeles

LUBRICATING OILS

See Signature of C. C. Bogardus on Can



For lubricating all upper parts of a motor, such as the valves, guides, valve stems, seats, cages, upper cylinder walls, and the sealing of the combustiton chamber with a fine film of oil by vaporization.
WEST COAST SUPPLY CO.
909 S. Grand Ave. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

PISTON RINGS

THE RING THAT CURES oil burning motors after others have failed is the genuine and original Oil Kontrol piston ring made by Sunset Mfg Co., L. A. Look for the name, beware of imitations. Jobbers and Distributors write for territory
SUNSET MFG CO., 1328 E. 6th St., Los Angeles, Calif.

BUSHINGS

BUSHINGS—BRONZE Machined to Size or Rough Castings
Impellers, Packing Nuts and Pump Shafts
Phillips Bronze Bushing Works
1460 E. Washington St., Los Angeles, Cal.

Goodrich Promotes McQueen.

E. D. Gibbs, director of advertising of B. F. Goodrich Rubber Co., Akron, regrets the loss of L. A. McQueen, who has been his assistant but now heads the newly created sales promotion department. His successor in the advertising department has not yet been announced.

* * *

Sutton on Signal Truck Staff.

M. B. Hoagland, president of Signal Truck Corp., Detroit, has appointed Earle T. Sutton to the factory staff. Mr. Sutton formerly was advertising manager of Denby Motor Truck Co., and prior to that had extensive sales experience, both wholesale and retail. The appointment carries out the Signal policy of maintaining an organization of men of proven fitness.

* * *

LaFayette Stockholders O. K. Plan.

Stockholders of LaFayette Motors Co., Indianapolis, met in New York June 20 and approved the reorganization plan giving it $2,000,000 new capital without change of personnel.

* * *

Burch Heads Arrow Motors.

A. C. Burch, former president of Signal Motor Truck Co., and later vice president of Clydesdale Motor Truck Co., will be president of Arrow Motors Co., recently incorporated, which took over the assets of Maibohm Motors Co. The other officers will be Sandusky business men.

* * *

Delivery Time for Gray.

In mid-June, Gray Motor Corp., Detroit, went on a production basis and now is about first-delivery time. A busy time is ahead, with thousands of orders to fill.

* * *

To Manage Ford's Railroad.

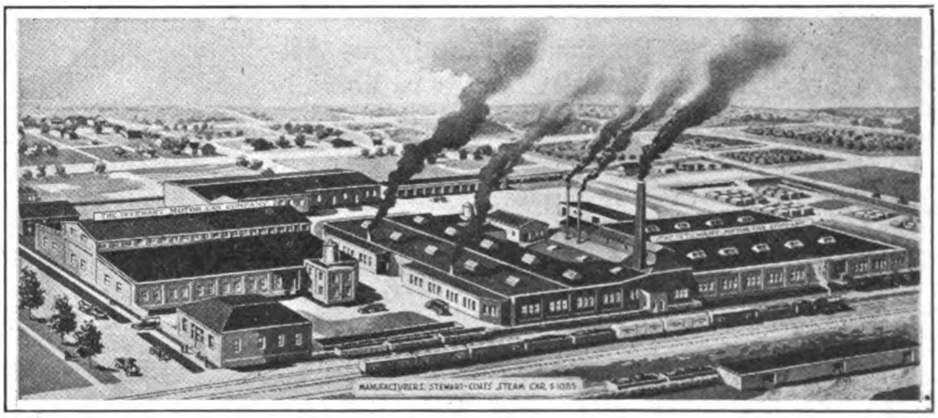
Fred L. Rockelman, for the last three years general manager of the Indianapolis branch of Ford Motor Co., has been appointed general manager of the D. T. & I. Railroad, with headquarters in Detroit. Mr. Rockelman has been with Ford many years, having been among the first 25 employes, beginning as an inspector.

* * *

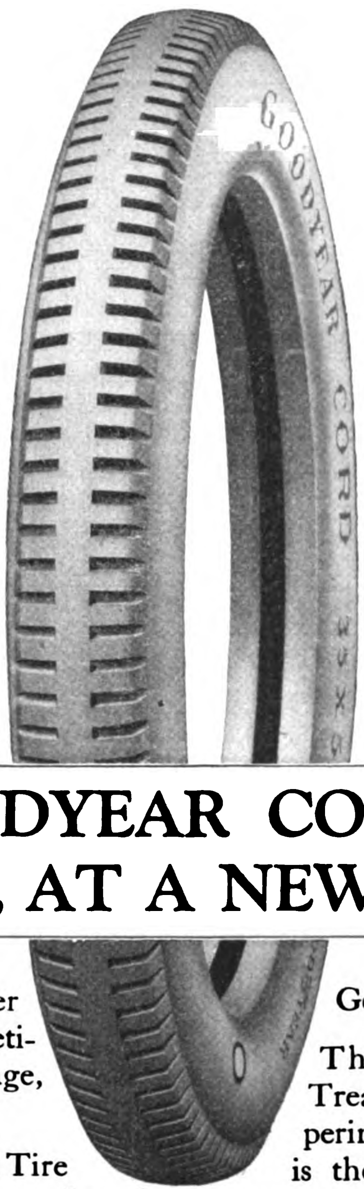
Lount Is Cadillac Comptroller.

H. J. Lount has been appointed comptroller of Cadillac Motor Car Co., Detroit. L. S. Carter has assumed Mr. Lount's former duties as head of the factory accounting department. Mr. Lount has been with Cadillac continuously since 1904, having begun as payroll auditor.

If insurance rules were stricter accidents would be fewer.



THIS PLANT OF COATS STEAM CAR CO. AT BOWLING GREEN, O., IS ONE OF THREE. Coats Steam Car Co. has its sales headquarters at 2337 Michigan Ave., Chicago. Plant No. 1 (shown above), for engine and boiler assembly, is at Bowling Green. O. Plant No. 2, for general assembly, at Columbus, O., is where the company makes its own bodies and does its own painting and trimming, and from here deliveries of cars are made. Plant No. 3, in Louisville, Ky., makes Cumberland cord tires, with which the Coats car, priced at $1085, is equipped as standard.



Goodyear Cross-Rib Cord Tire

A NEW GOODYEAR CORD, WITH A NEW TREAD, AT A NEW LOW PRICE

Now, the Goodyear Dealer is able to defeat all competitors on every point of mileage, quality, and *price*.

For a new Goodyear Cord Tire combines Goodyear quality and cord tire service with a retail price even lower than that of many a "long discount" tire.

This new tire is the Goodyear Cross-Rib Tread Cord.

Like the famous Goodyear All-Weather Tread Cord, it is liberally oversize; its foundation is genuine high-grade, long staple cotton; it embodies the patented Goodyear group-ply construction; it is a real Goodyear Tire in every way.

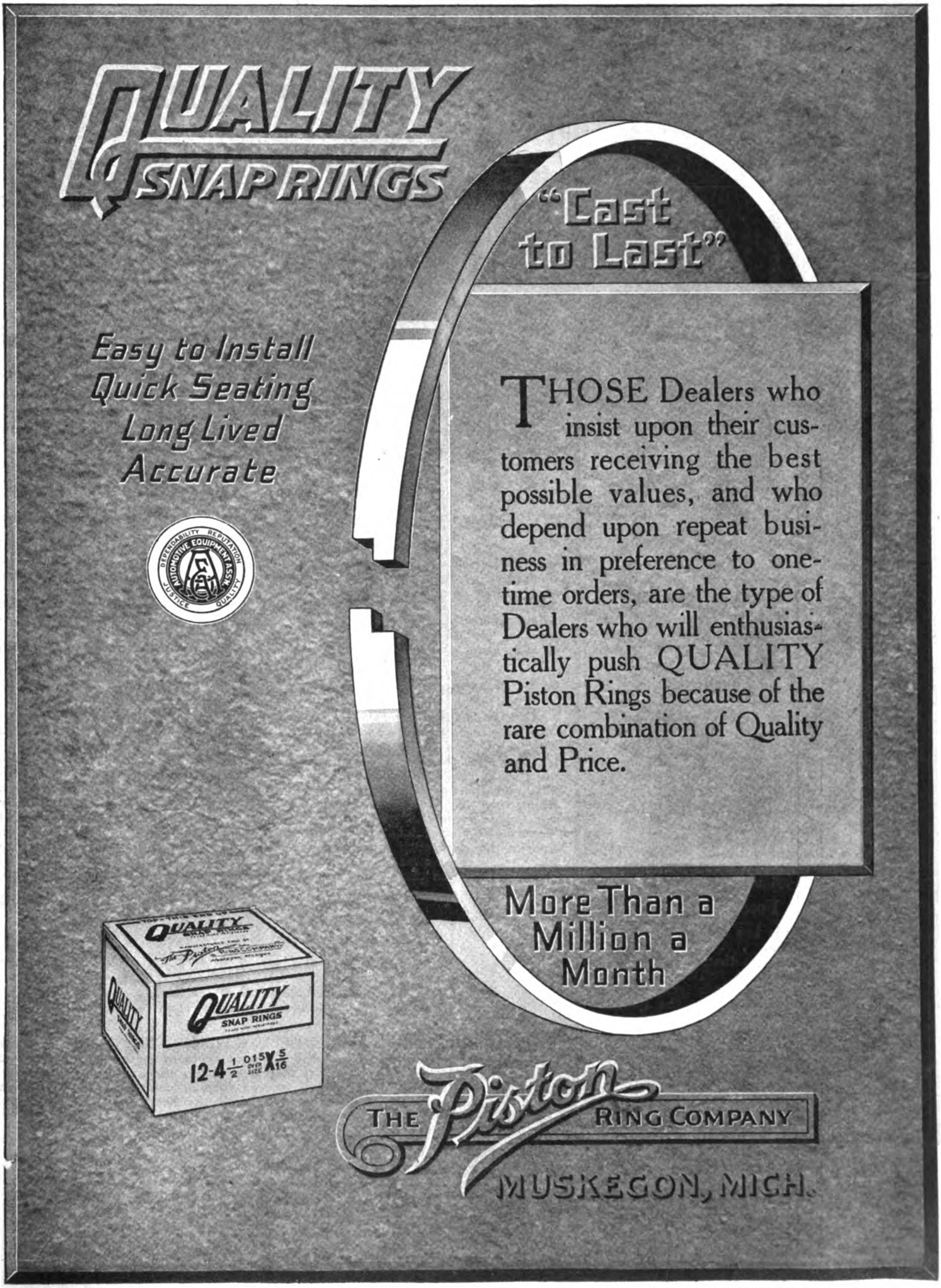
The Goodyear Cross-Rib Tread is the result of long experiment and patient work. It is the product of a reputable company which has a world-wide reputation to safeguard.

Goodyear Dealers will instantly see that this new tire completes the Goodyear line, that its attractive price eliminates the need of handling any tires but Goodyears.

If you want to be a Goodyear Dealer and enjoy the benefits of selling Goodyear Tires, write to Goodyear, Akron, Ohio, or Los Angeles, Calif.

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.



QUALITY SNAP RINGS

"Cast to Last"

Easy to Install
Quick Seating
Long Lived
Accurate

DEPENDABILITY REPUTATION
AUTOMOTIVE EQUIPMENT ASS'N
JUSTICE QUALITY
QUALITY SNAP RINGS
QUALITY SNAP RINGS
12-4 1/2 .015 OVER SIZE X 5/16

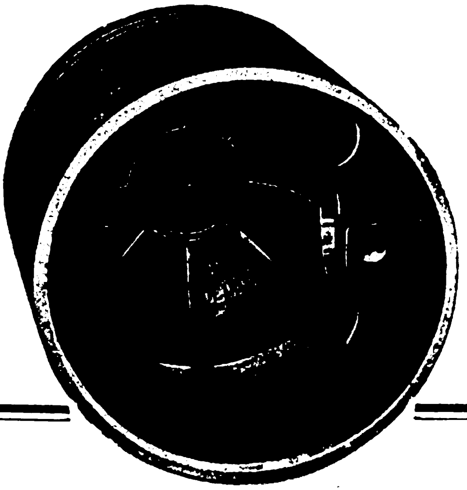
THOSE Dealers who insist upon their customers receiving the best possible values, and who depend upon repeat business in preference to one-time orders, are the type of Dealers who will enthusiastically push QUALITY Piston Rings because of the rare combination of Quality and Price.

More Than a Million a Month

THE Piston RING COMPANY
MUSKEGON, MICH.

The One Big Sale Talk---

"PERFORMANCE of DELUXE Pistons"



Every One of These Motorists is a Salesman For You—

Marmon

"I am glad you sold me those DELUXE Pistons, ... for my car is more powerful, smoother and more flexible than it ever was before."

Studebaker

"I am using much less oil and obtaining a greater mileage per gallon of gasoline. The engine runs with less vibration, delivering greater power, and in every way more satisfactorily than before."

Oakland

"After installing DELUXE pistons, ... it was the best Oakland car that ever came down the street. Smooth running, no vibration, and plenty of power and pep at the touch of the throttle."

Chevrolet

"On 490 Chevrolets we have installed eight sets. In each case the speed has been increased more than 20% and motor vibration eliminated to such an extent that they run almost like six-cylinder cars."

Ford

"Gasoline mileage has increased to 25 miles per gallon. . . . . . oil consumption is less than one gallon per thousand miles. The car is capable of making speeds from 5 to 50 miles per hour without the least vibration."

Tell Your Prospect What DELUXE Pistons Did For These Motorists

You can sell DELUXE Pistons to your customers with a clear conscience. They have made good in thousands of cars. Nearly a million have been sold—national evidence of super-performance. And best of all, from your point of view, is the fact that every man to whom you sell DELUXE Pistons will become an enthusiastic booster of your shop—he will have a wholesome respect for your judgment in the selection of replacement parts.

How They're Made

DELUXE Light Weight Pistons are made of the best quality grey iron, melted in electric furnaces, cast under expert supervision in our patented coreboxes, and from casting room to finishing machines are handled by skilled men—experts at piston manufacture.

What They Do

DELUXE Pistons minimize vibration, eliminate piston slap, oil pumping and gas leakage—they run cooler, give the motor more power and pickup and materially decrease all operating costs. There's something in the feel of a DELUXE equipped motor that you can hardly describe to your customer, but it marks the difference between a motor that runs as sweet and true as a dynamo and one that seems all tired out.

The Rib Construction

The patented rib construction of the DELUXE Piston is the key to its success. From a solid reinforcing ring in the piston head, integrally cast ribs radiate across the head and down the sides of the piston, eliminating useless weight and strengthening the piston where most strength is needed.

How They Do It

The rib construction makes possible a piston 40 to 50% lighter than ordinary cast iron pistons. This in itself minimizes vibration. Made of the same material as the cylinder block, DELUXE Pistons have the same rate of expansion; they can be fitted closer than any other type of piston, eliminating piston slap, oil pumping and gas leakage. The ribs radiate the heat from the piston head down the sides and into the crank case—DELUXE Pistons run cooler.

DELUXE
LIGHT WEIGHT CAST IRON PISTON
"The Successful Light Weight Piston" ©

It will pay you to investigate DELUXE Pistons. They're made in stock and oversize patterns for over 1400 different types of motors. Write us for descriptive literature showing what they have done, and are doing every day, in every part of the United States and in foreign countries. The genuine DELUXE Piston has the name stamped inside the head. Do not be misled by substitutes.

Patented and Manufactured by

Clark-Turner Piston Company
INCORPORATED
Los Angeles, California

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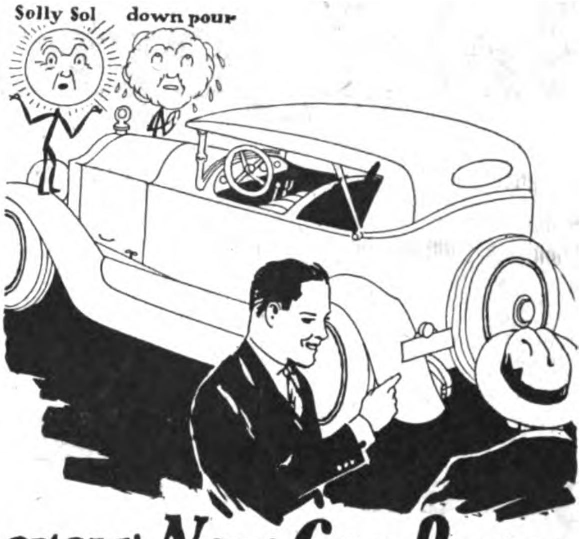


every New Car Buyer
is a Tire Cover Prospect

75,000 cars were sold in the Pacific States the first four months of this year.

More cars are being sold every day and somebody is going to get the profits from the sale of Tire Covers to these new owners. Tire Covers are a necessity—"Solly Sol" and "Down Pour" work for you all the time.

Accessory dealers and motor car dealers—here's your opportunity. Sell "Angelus" Tire Covers and win confidence along with making a satisfactory profit.

Angelus Tire Covers FIT—they WEAR and they are doubly GUARANTEED.

And the "Angelus" Painting process is something new. Any monogram or emblem can be reproduced in actual colors—the chance for the very best kind of advertising—let us tell you more about this process. But be sure you specify "Angelus" Tire Covers when ordering from your Jobber.

Uniform prices and discounts—a square deal and good business for everyone.

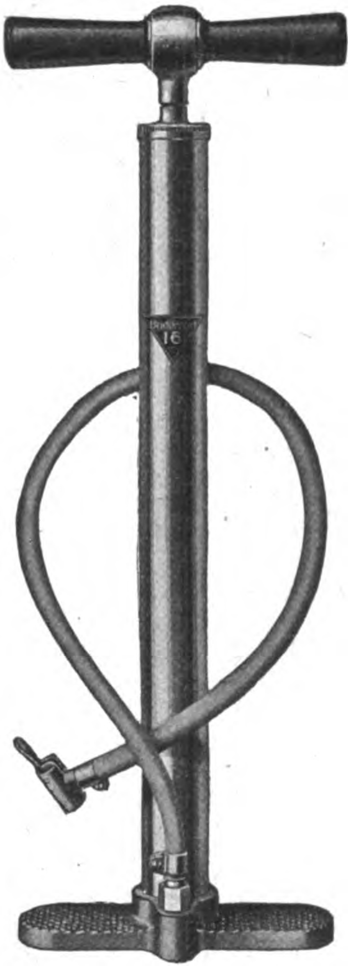
Angelus
Tire Covers

the tire cover with
the Drain Holes

Parker & Waterman Mfg. Co.
Los Angeles
Makers of Tire Covers, Cushions, Trunks and Covers.
Distributors everywhere.

Bridgeport No. 16

for all size tires



Cylinder

Seamless Drawn Brass will not rust. Perfectly finished inner surface insures smooth, easy operation of piston, and prevents excessive wear on leather bucket.

Piston

Equipped with patented bucket expander which automatically operates bucket under all conditions. High compression insured.

Other Features

- Leak-proof base connection
- Check valve in base
- Thumlock hose connection
- Three ply long hose
- Full grip handle

Easy Sales

because the superior features of the pump are obvious and quickly appreciated.

Appearance

clearly indicates the excellence of construction.

Performance

Superiority in construction details means better performance.

Guarantee

on material and workmanship protects you in your replacements.

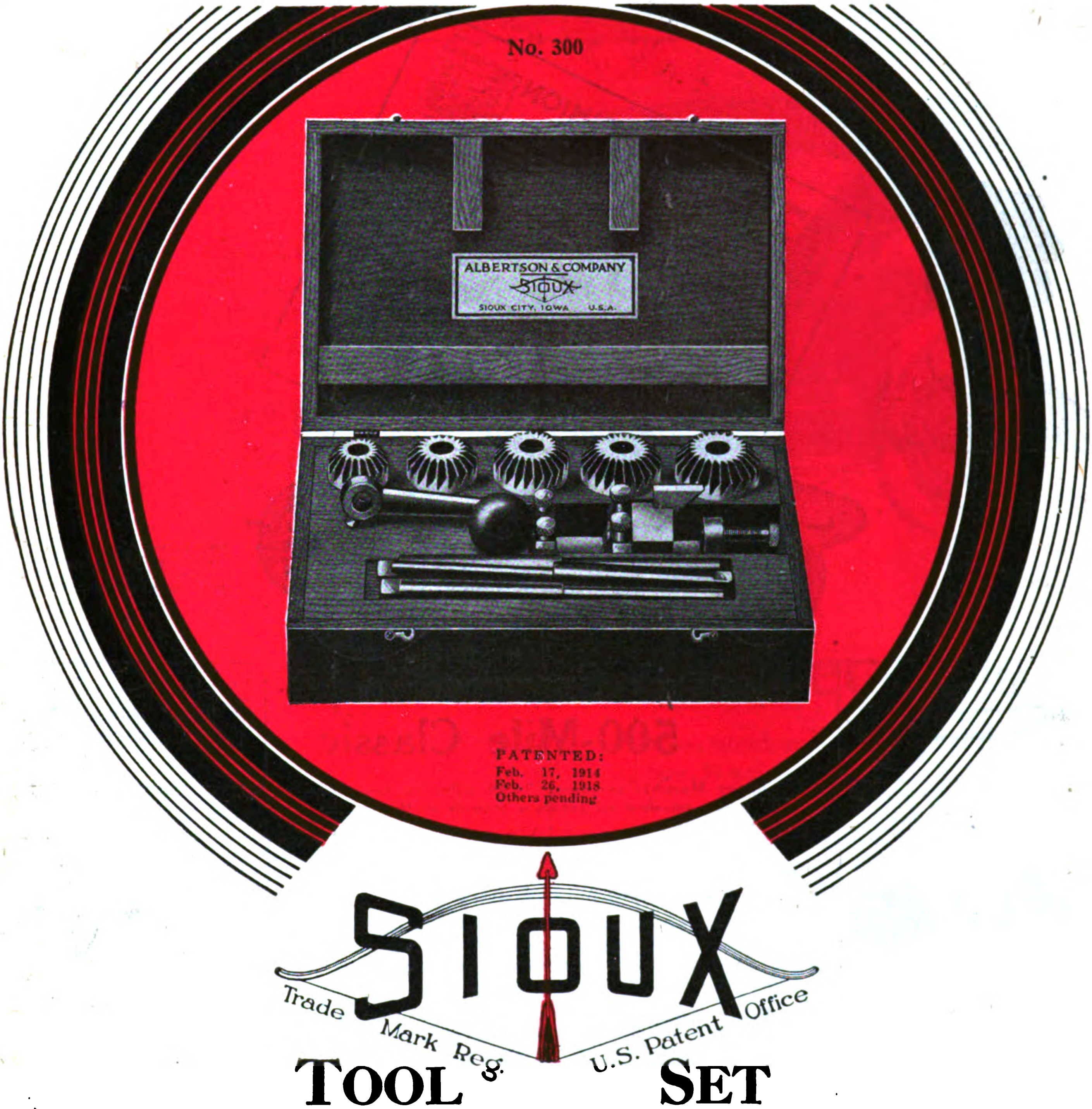
List Price, $3.75

with liberal discount to the trade. Write for our sales proposition.

RUST-PROOF
LEAK-PROOF
Better-Built

Bridgeport Brass Company

Bridgeport 2315 Connecticut


No. 300
ALBERTSON & COMPANY
SIOUX
SIOUX CITY, IOWA U.S.A.
PATENTED:
Feb. 17, 1914
Feb. 26, 1918
Others pending

SIOUX

Trade Mark Reg. U.S. Patent Office

TOOL SET

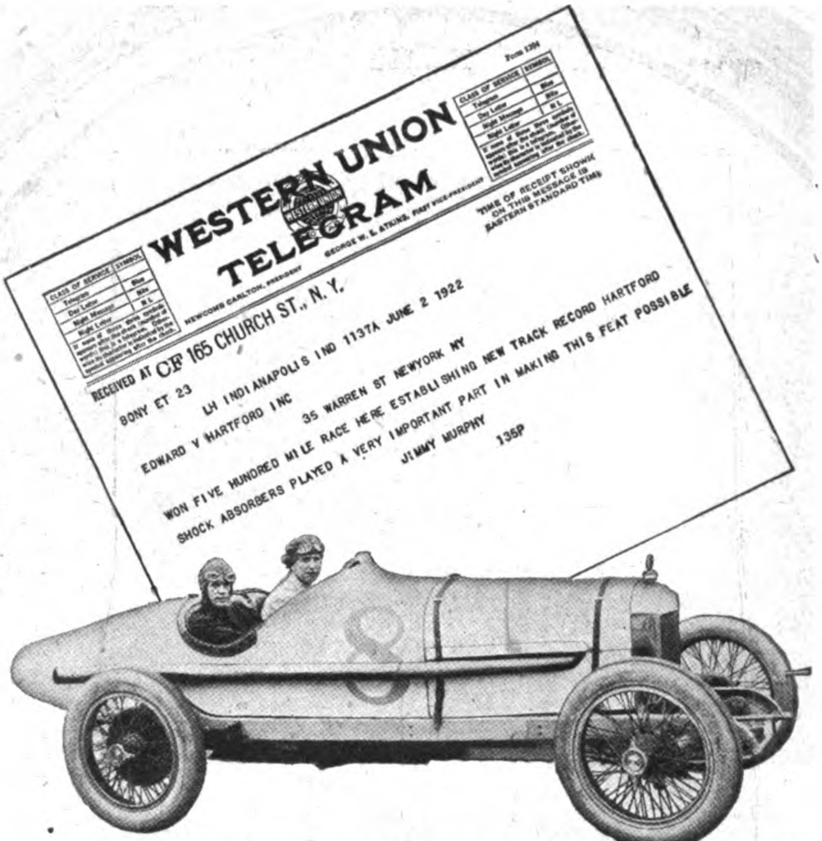
A time-saver, labor-saver and profit-raiser.

You can accurately seat the valves of any standard motor with this outfit and do away with hours of grinding. Valves properly seated require only a few turns of the grinder.

SIOUX SERVICE Keeps the reamers and cutters sharp at no cost to you except carrying charges. When reamers or cutters get dull send them prepaid and direct to us with return postage and they will be sharpened and returned the same day received. We maintain a special department for this service. Demand Sioux Tools if you want Sioux Service.

Jobbers Everywhere Sell Them

ALBERTSON & CO. **SIOUX CITY, IOWA**



RECEIVED AT CF 165 CHURCH ST., N. Y.

BONY ET 23

LH INDIANAPOLIS IND 1137A JUNE 2 1922

EDWARD V HARTFORD INC

35 WARREN ST NEWYORK NY

WON FIVE HUNDRED MILE RACE HERE ESTABLISHING NEW TRACK RECORD HARTFORD SHOCK ABSORBERS PLAYED A VERY IMPORTANT PART IN MAKING THIS FEAT POSSIBLE

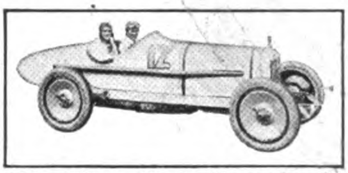
JIMMY MURPHY

135P

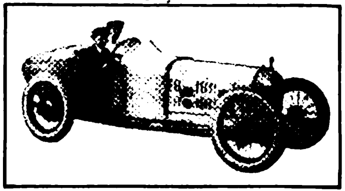
WESTERN UNION TELEGRAM
NEWCOMB CARLTON, PRESIDENT
GEORGE W. E. ATKINS, FIRST VICE-PRESIDENT
TIME OF RECEIPT SHOWN ON THIS MESSAGE IS EASTERN STANDARD TIME
CLASS OF SERVICE
SYMBOL
Telegram
Day Letter
Blue
Night Message
Nite
Night Letter
N L

1st—Jimmy Murphy
(Murphy Special)
Time—5:17:30.79
Photo by Kirkpatrick

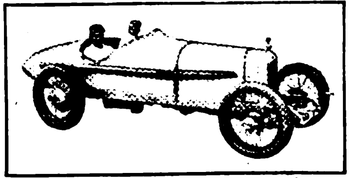
Records Smashed in 500-Mile Classic



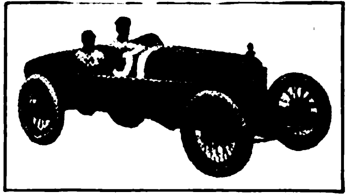
2nd—Harry Hartz (Duesenberg)
Time—5:20:44.34
Photo by Kirkpatrick



3rd—Eddie Hearne (Ballot)
Time—5:22:26.06
Photo by "That Man Gravelle"



4th—Ralph De Palma (Duesenberg)
Time—5:31:04.65
Photo by Kirkpatrick



5th—Chas. F. Haibe (Duesenberg)
Time—5:31:13.45
Photo by "That Man Gravelle"

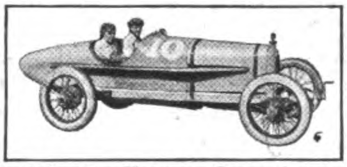
Jimmy Murphy, averaging 94.48 miles an hour for 500 miles, smashed all previous records at the Indianapolis Speedway.

Following him, the next nine cars thundered around the track in the fastest 500-mile race ever run. Five of the first cars bettered the old record.

For over five hours these cars were subjected to the most severe strain and wear imaginable. Every part of the finely adjusted mechanism was racked by the terrific speed.

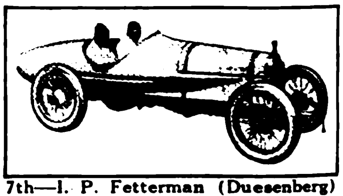
It is a significant fact that the first ten cars were protected from destructive vibrations and dangerous wheel slippage by Hartford Shock Absorbers.

Nearly 750,000 motorists have learned the lesson taught by the world's leading racing drivers. There is only one shock absorber for the racer—and there is likewise only one shock absorber for the motorist—the Hartford! $35.00 per set of four—with standard fittings—f.o.b. factory.

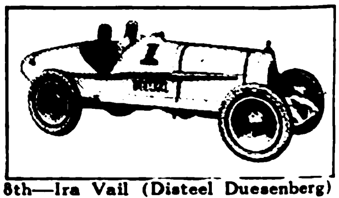


10th—Joe Thomas (Duesenberg)
Time—6:05:01.47
Photo by Kirkpatrick

6th—Jerry Wonderlich (Duesenberg)
Time—5:37:52.84
Photo by Kirkpatrick



7th—I. P. Fetterman (Duesenberg)
Time—5:40:55.44
Photo by Kirkpatrick



8th—Ira Vail (Disteel Duesenberg)
Time—5:50:07.42
Photo by Kirkpatrick

9th—Tom Alley (Monroe Special)
Time—5:57:36.13
Photo by Kirkpatrick

EDWARD V. HARTFORD, Inc., 35 Warren Street, New York City, U. S. A.

PACIFIC COAST DISTRIBUTORS

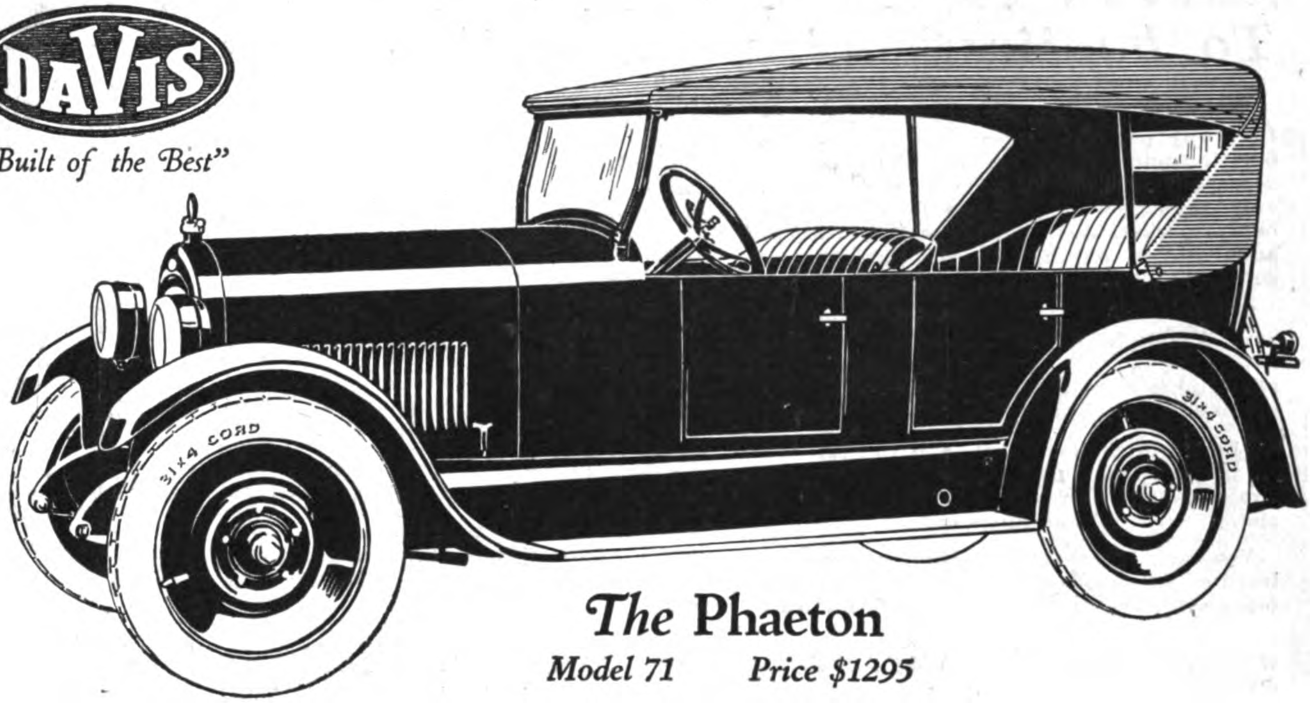
Reynolds & Reynolds, Tacoma, Wash.
Reynolds & Reynolds, Seattle, Wash.

Henry Lansdale, Los Angeles, Calif.
Wiggins Co., Inc., Portland, Ore.

Salt Lake Hardware Co., Salt Lake City, Utah.
Chas. R. Burman, San Francisco, Calif.

DAVIS

"Built of the Best"



The Phaeton

Model 71 *Price $1295*

Breaking All Sales Records

ALL sales and production records at the Davis factory were broken during June. It was the biggest June in Davis history!

Introduction of two new smaller Series 71 models (Phaeton and Sedan), installation of the new Continental 8-R Motor in the Fleetaway, Man O' War, Coupe and large Sedan, and adoption of new 1923 bodies, have sent Davis sales soaring to new levels!

Likewise, in point of new distributor contracts signed, Davis made history during the month of June.

Davis value is outstanding—easily seen—quickly appreciated. SALES—and quick ones! The Davis line holds an unsurpassed opportunity for any distributor who is qualified—and will do his share of the pushing. Write!

GEO. W. DAVIS MOTOR CAR CO., RICHMOND, IND.

Abounding Value in these New Davis Models and Prices

(71)	*Phaeton*	$1295
(74)	*Sedan*	$1795
(63)	*The Fleetaway*	$1695
(65)	*The Man o' War*	$1595
(67)	*Coupe*	$2095
(66)	*Sedan*	$2195

——at the factory, plus war tax

Davis is the oldest quantity user of Continental Motors

DAVIS

"BUILT OF THE BEST"

Extra Profits—Start *Now*

To be first—wire—or mail coupon

ALMOST every motorist *wants* wire wheels —why not *sell* them? You can be the first in your community to cash in on the demand for Hayes Wire Wheels—the first and only real demountable at the rim wire wheels on the market. Just sign and mail the coupon and begin to *get* these profits that are now getting away from you.

The demand is ready made—waiting for you. People have waited for really practical demountable at the rim wire wheels—one that offers them everything they wish in the way of convenience, beauty and dependability.

The Hayes is that wheel—and you can sell it. It is easy to install—convenient for quick tire changes. A woman or child can easily change tires in five minutes or less.

You know—every dealer and motor car manufacturer knows—that *Hayes means dependability* in wheels. Already, over half of America's motorized passenger traffic rides on Hayes Wheels. Of all the cars produced 54% are Hayes equipped. The same immense resources which have made this possible are back of Hayes Demountable at the Rim Wire Wheels.

Here is a *real sales opportunity* for you—Can you *see* it?—Will you *grasp* it? Every owner of a Ford, Chevrolet, Earl, Durant, Nash, Dodge and other cars is a prospect. You can sell them Hayes Wire Wheels—back them up to the limit—and be assured that you in turn are backed up by the largest manufacturer of wheels in the world.

Clip the coupon and mail it today. Get our complete literature and selling campaign.

Study the strong selling points of the Hayes. Convince yourself that Hayes Wire Wheels mean increased business for you—real *extra* profits.

Six Strong Selling Points

1 **One-piece steel felloe, of channel steel, well adapted for assembly of the wire spokes and gives perfect support to the rim.**

2 **Rim supported front and back by in-rolled bead, excludes dirt, Provides ideal attachment for lugs.**

3 **Demountable rim lugs permanently attached to rim, eliminating driving studs.**

4 **Lugs are made from mill-rolled bars. Riveting portion integral with lug. No castings used.**

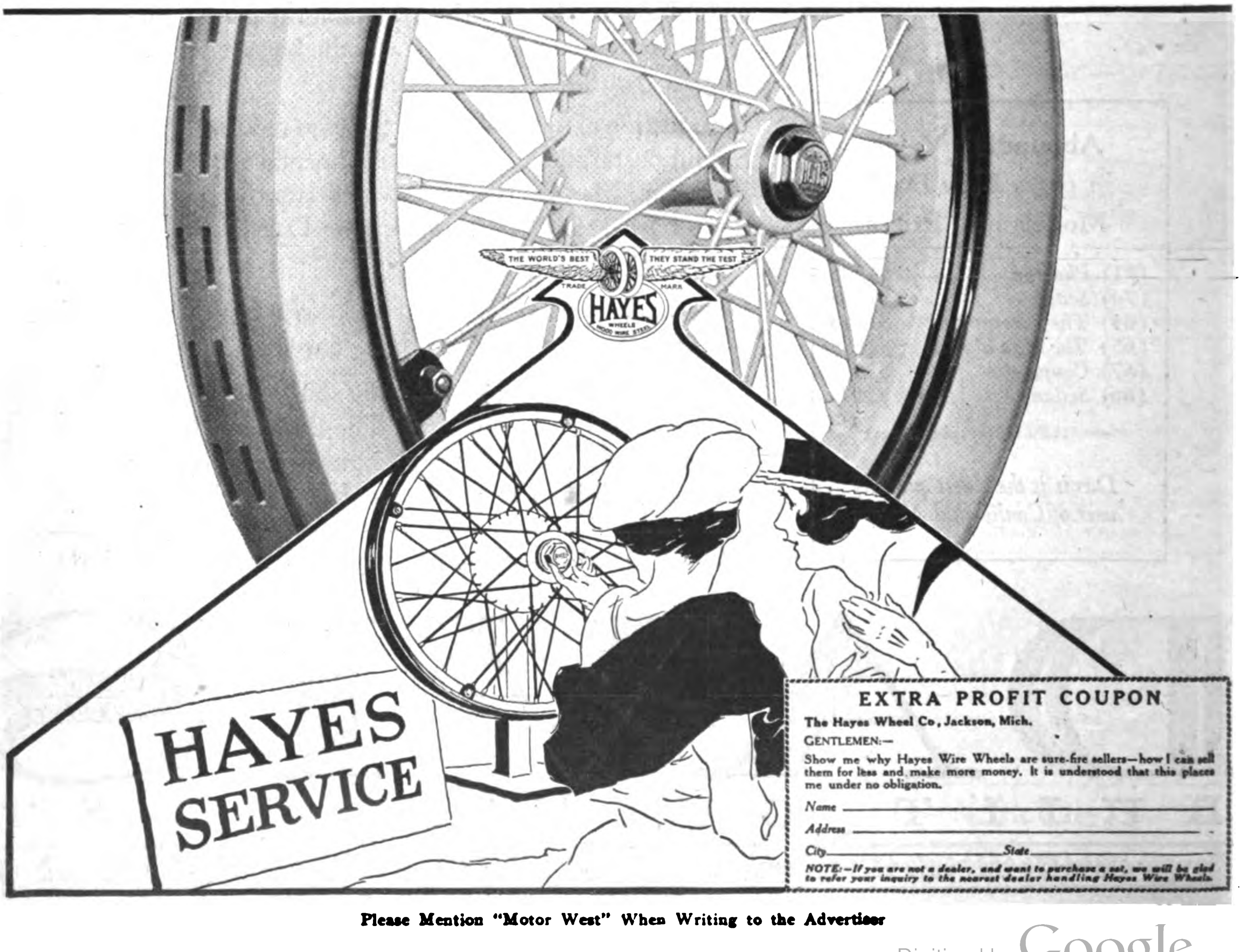
5 **Tapered nuts fit countersunk holes in lugs, and act as lock-nuts.**

6 **Integral hub makes wheel interchangeable with wood wheel.**

HAYES WHEEL COMPANY *of New York* **JACKSON, MICHIGAN**
Branches: **New York Chicago San Francisco Indianapolis**
Stocks Carried in Principal Cities

WESTERN COAST DISTRIBUTORS
Bennett-Tormey Co., 1128 S. Los Angeles St., Los Angeles, Cal. (After August 10th, Grand Ave. at 15th St.)
McAlpine-Schreiner, 1520 Tenth Ave., Seattle, Wash. Marshall-Wells, Ltd., Vancouver, B. C.

HAYES DEMOUNTABLE AT THE RIM WIRE WHEELS



EXTRA PROFIT COUPON

The Hayes Wheel Co., Jackson, Mich.

GENTLEMEN:—

Show me why Hayes Wire Wheels are sure-fire sellers—how I can sell them for less and make more money. It is understood that this places me under no obligation.

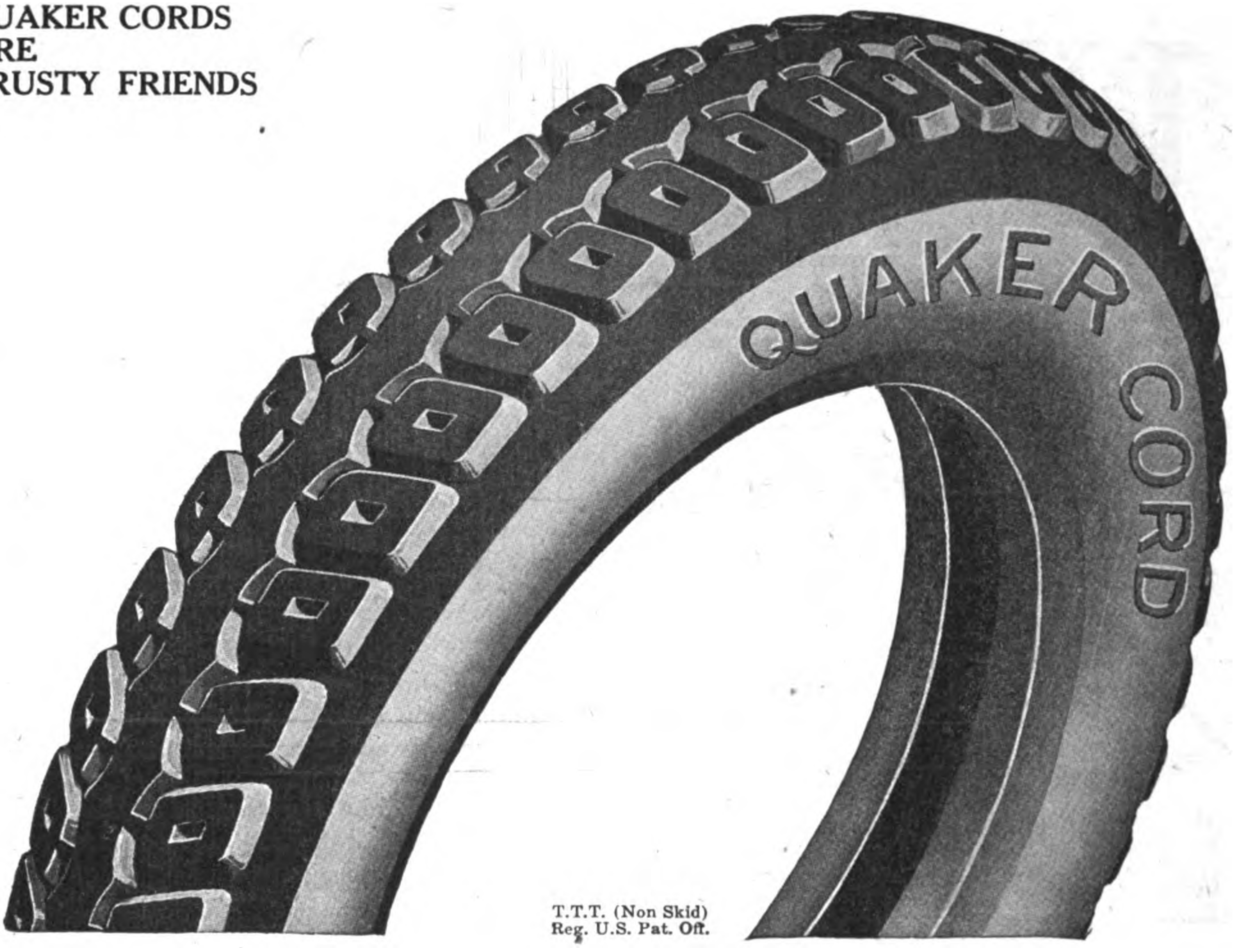
Name ______________________

Address ______________________

City ______________ *State* ______________

NOTE:—If you are not a dealer, and want to purchase a set, we will be glad to refer your inquiry to the nearest dealer handling Hayes Wire Wheels.

QUAKER CORDS
ARE
TRUSTY FRIENDS



T.T.T. (Non Skid)
Reg. U.S. Pat. Off.

Quaker Cords Build Up the Dealer's List of Friends

TIRE dealers determined to build up a big business this year and increase their sales year after year, should look into Quaker Cords at once and get our dealer proposition.

These are the tires which make real friends with the car-owner. Users of Quaker Cords are the dealer's best friends. Write us today, we will help you.

QUAKER CITY RUBBER COMPANY

FACTORIES—PHILADELPHIA

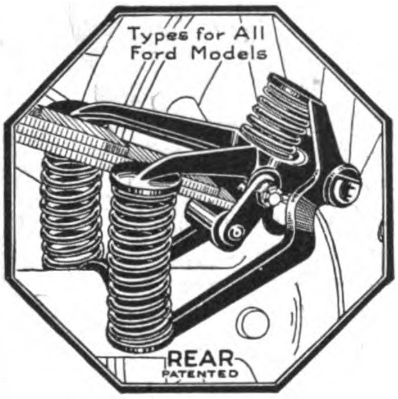
Manufacturers, Automobile Tires and Tubes, Mechanical Rubber Goods

Philadelphia	Chicago	Pittsburgh	New York
624-26-28 Market St.	217-221 W. Huron St.	211 Wood St.	53 Murray St.

Pacific Coast Office, 304 Williams Building, San Francisco

BURPEE-JOHNSON
PATENTED
FloatAforD
SHOCK ABSORBERS

Do not bind, clamp or break Ford Springs


Types for All Ford Models
REAR
PATENTED

Open and closed car types same price. Types for external brake car no extra cost.

Designed to work with Ford Springs and not against them, FloatAforDs do not bind, clamp or break Ford Springs. Installed FloatAforDs do not raise the car out of its normal position.

The two coil springs cushion the down thrusts and the "third" spring checks the upthrow and the side sway. It performs a very definite work outside the two coil springs.

QUICK SALES—GOOD PROFITS

Hundreds of dealers turn their FloatAforD stock twice a month. Distributors in the western cities listed carry ample stocks for prompt shipments. Write them for literature, prices, and territory. Product fully guaranteed.

Our Dealer plan is most fair; only a small investment is required. Thousands of sets are in use today. Sell them on a ten-day trial refund basis. Rear shocks come fully assembled. Easily installed. No holes to drill.

Western Distributors

General Service Co., 1500 S. Hope St., Los Angeles, — Southern California.

W. B. Vestal, 357 Van Ness Ave., San Francisco,—Northern California, Hawaiian Islands.

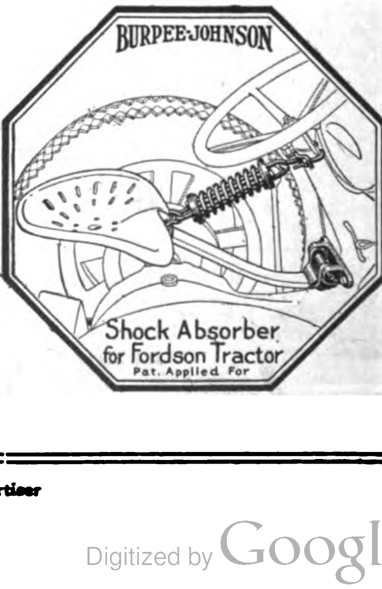
Ballou & Wright, 1515 12th Street, Seattle, Wash.

Ballou & Wright, 89-95 N. 10th St., Portland, Ore. — Washington and Oregon.

Fordson Tractor SHOCK ABSORBER

This wonderful accessory gives comfort to the driver and insures a greater day's work from the tractor. Takes up all the bumps and jars from the rough ground in the fields or on the highway.

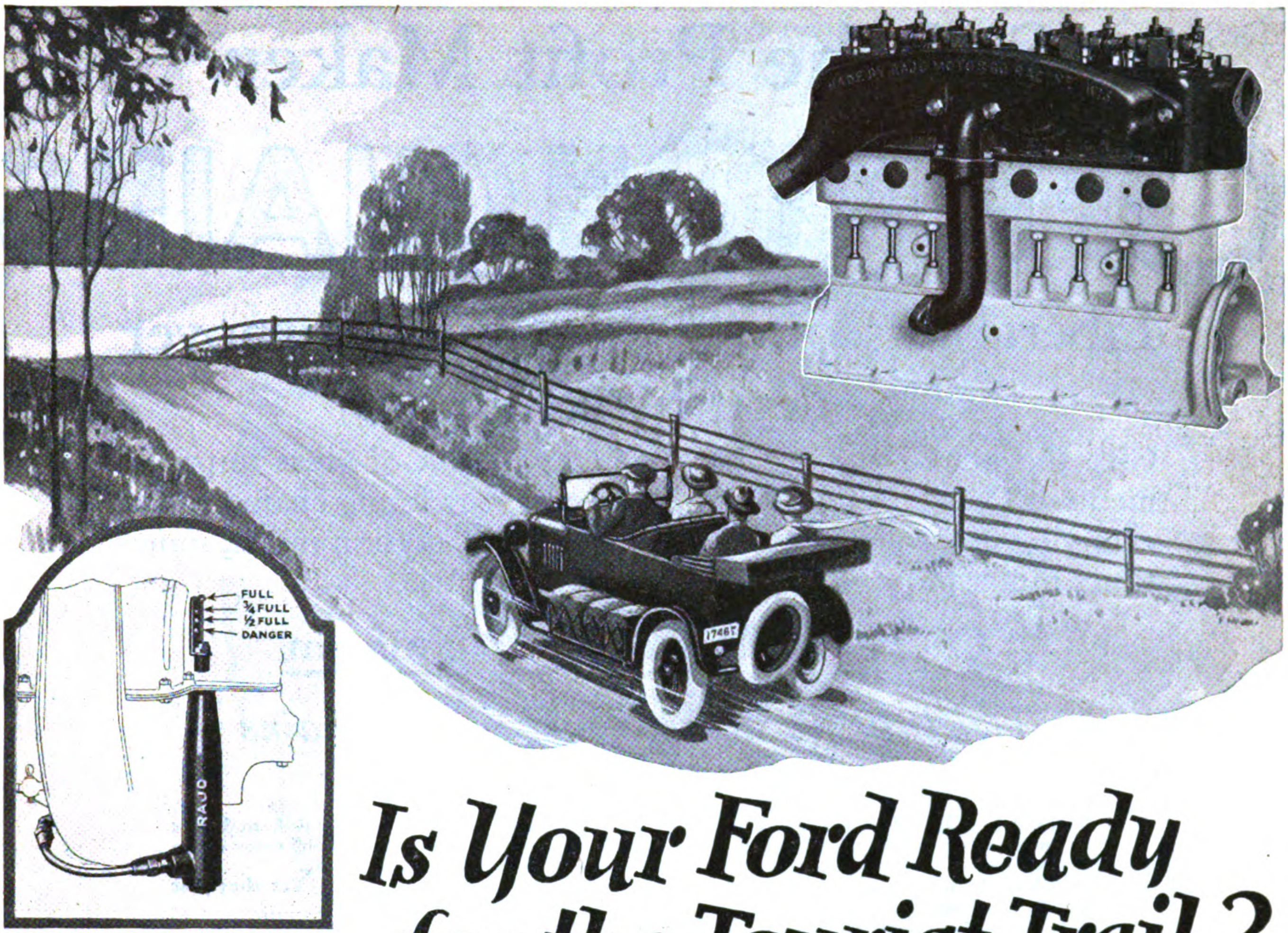
Made of high grade materials. Easily installed. No holes to drill. Every Fordson owner needs one. Write distributors for literature and prices.



Burpee-Johnson Company, Mfrs.

Canadian Office and Factory: 510 King St., East Toronto

1918 Singleton Street
Indianapolis, Ind.



Is Your Ford Ready for the Tourist Trail?

And Say—

If you've been out on a long motor tour before, no one has to tell you about the importance of keeping your crank case well filled with good oil—and how quickly your motor consumes oil on an all-day run. Know at all times how much oil you have in your crank case. A RAJO OIL GAUGE will tell you. Just lift the hood and read the red-tipped wire. Always on the job. Easily installed. Price: $3.00

In making inquiry to this advertisement, write the Western Auto Supply Company store nearest you. Branches: Los Angeles, Long Beach, Pasadena, San Bernardino, San Diego, Bakersfield, Fresno, Stockton, San Francisco, Sacramento, Oakland, San Jose, Seattle, Tacoma, Bellingham, Yakima, Spokane, Portland, Boise, Denver, Phoenix.

Your plucky little Ford may be a go-getter at home when it isn't loaded down with luggage and camping equipment. But when it's called upon to take the place of half a dozen pack horses and a young passenger train you can't blame it if it fails to make some of the hills you are sure to encounter on a long trip, or gets stalled in a muddy road or a sandy stretch that it would walk right through ordinarily.

Put a **Rajo Valve-In-Head** on your Ford before you start on that vacation trip. The Rajo will supply all the power you will ever need. It adds from 8 to 14 H. P. to the capacity of your motor—the surplus that will take care of all the extra weight you take with you on a motor hike. In addition, it gives your engine remarkable flexibility—a pick-up of from 5 to 40 miles in 14 seconds and the ability to throttle down to three or five miles an hour in high gear. And it gives you greater gasoline mileage.

Order your head today. The price is only $57.75 (including tax).
We can ship immediately. Literature on request.

WESTERN AUTO SUPPLY CO., Distributors West of Denver
RAJO MOTOR CO., 1361 Racine St., Racine, Wis., Manufacturers

RAJO
ACCESSORIES FOR FORDS

Sell the Profit Maker

OFF'N'ON CHAINS

Liberal Discounts Quick Turnover

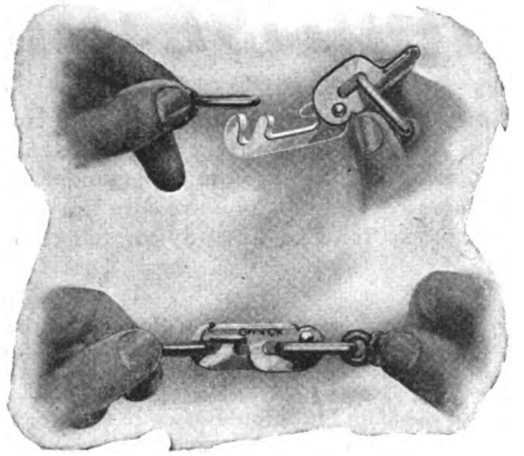
Modern Merchandise

Give the public—your customers—the benefit of great improvements. They have always complained about losing chains, about changing cross chains and about their great variation in life, sometimes much too soft and more often too brittle.

OFF'N'ON Chains are Uniform

Two little features in OFF'N'ON Chains give big results—

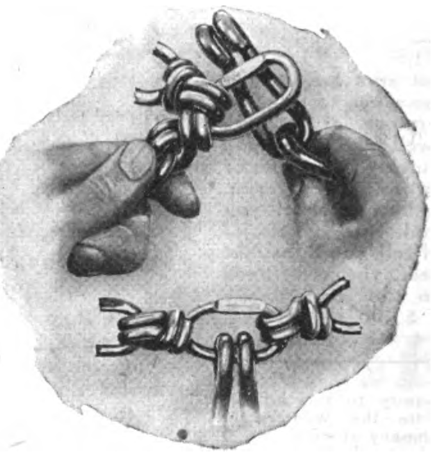
This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No more lost chains—no more loose chains.



The Positive Lock

This patented slip-on link makes it easy to take off the old cross chain and put on a new one.

A child can do it. Yet they cost no more.



The Slip-on Link

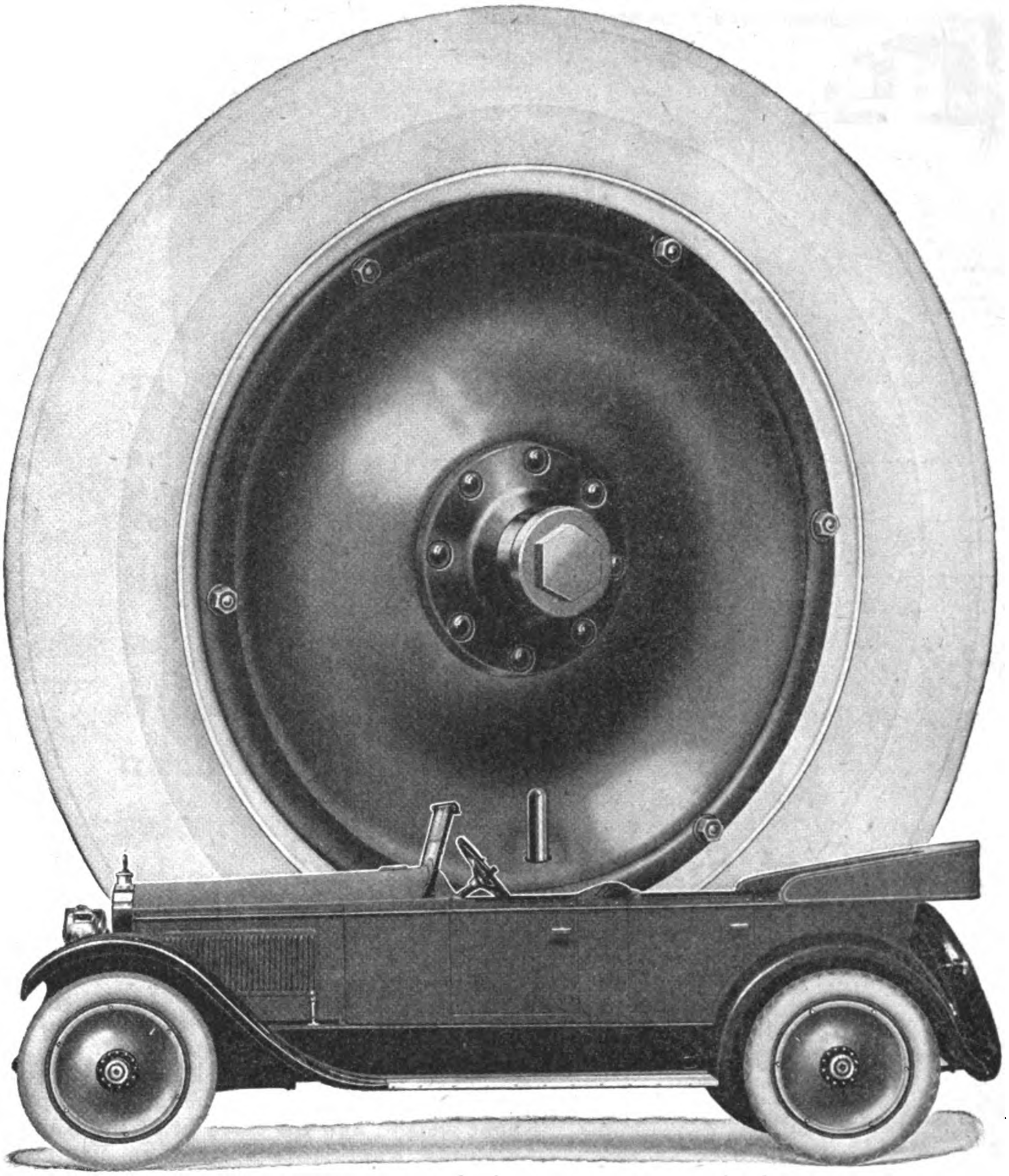
Order from your jobber today

Place your fall orders early so the jobber can protect you on delivery. Order spare cross chains at the same time. You can always sell an extra set of cross links with every chain.

PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers 520 Belmont Ave., Newark, N. J.

Branches:
CHICAGO—17 So. Jefferson Street
ATLANTA—24 Nassau Street
KANSAS CITY—1712 Grand Avenue
SAN FRANCISCO—977 Mission Street



Gier Tuarc Steel Wheels are Standard Equipment on the Packard Sport Model

Better Operation and Appearance

Gier
Tuarc
STEEL WHEELS
a Motor Wheel Product

Tuarc beauty exacts no compromise with practicability. On these steel wheels tire changing remains within the capacity of anyone who can handle a demountable rim. Hubs are never exposed, or subject to hasty roadside manipulation.

Inflation, with any air hose, is through direct outside, standard wood wheel valve stems—first made possible for steel wheel use by the original Tuarc design. Spare tires are conveniently carried on the rim alone, involving no excess weight. Essential to permanent quiet, true running, and great strength is the exclusive one piece, smooth-contour design of the Tuarc wheel proper.

So many motorists are selecting new cars with Tuarc wheels or are applying them to their present cars, for the same reasons which make them standard factory equipment on many of the finest automobiles, including the Packard Sport Model.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

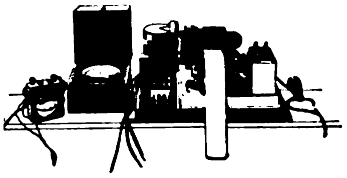
Motor Vehicle Wheels Complete — Metal Stampings — Steel Products

509 Fisk Bldg., B'dw'y at 57, New York
584 Commonwealth Ave., Boston
10 South 18th St., Philadelphia

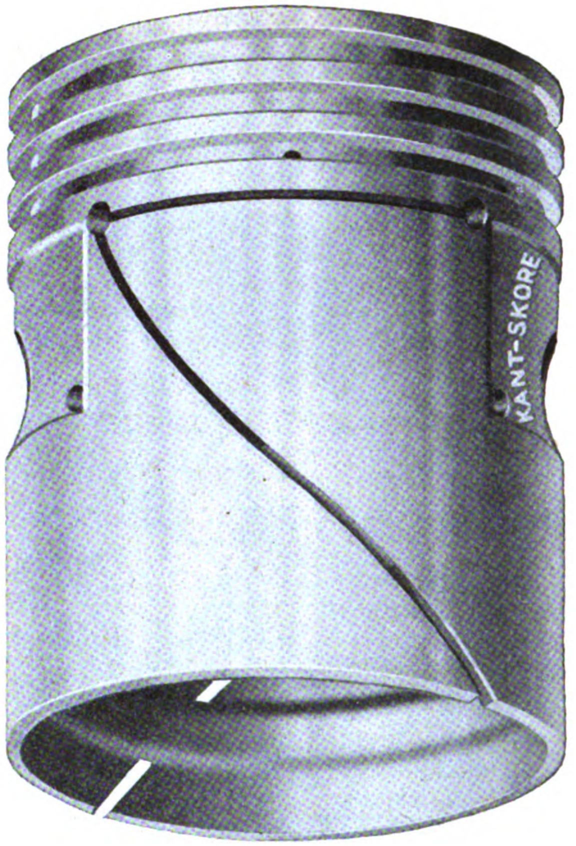
601 Capitol Theatre Bldg., 120 Madison Ave., Detroit

Bigelow Blvd. & Craig, Pittsburgh
913 Phelan Bldg., San Francisco
1341 So. Hope St., Los Angeles

Tuarc



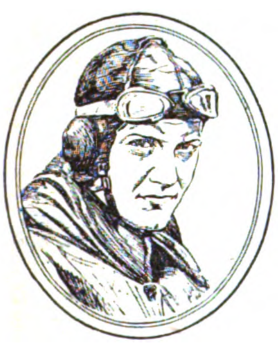
The official test was clocked by the Indianapolis Motor Speedway electric timing machine, the same instrument which records the speeds of fast boat races, aeroplane flights and other speed classics. The official Haynes 75 Speedster record is printed electrically on a paper tape as shown in the picture.



"Howdy" Wilcox Says—

At its topmost speed of more than eighty miles an hour, the strictly stock Haynes 75 Speedster demonstrated its lack of motor vibration. Picture shows "Howdy" Wilcox making a sharp curve on the Indianapolis Motor Speedway.

"at Topmost Speed it Showed a Decided Lack of Motor Vibration---"



Howard S. Wilcox, world's speed king and winner of the Indianapolis Motor Speedway 500-mile international classic

"On Thursday, March 9, 1922, I drove a strictly stock Haynes 75 Speedster over the Indianapolis Motor Speedway course, at Indianapolis, Indiana. I attained speeds ranging from seventy-four (74) to eighty (80) miles an hour. The speeds were clocked officially by the Indianapolis Motor Speedway electric timing apparatus. In my opinion the Haynes-built 75 six cylinder engine is a remarkable stock motor. It has the necessary speed, stamina and get-away to meet the requirements of the most exacting motorist, and AT TOPMOST SPEED IT SHOWED A DECIDED LACK OF MOTOR VIBRATION. It is the sturdiest and fastest stock sport car I have ever driven to date."

(Signed)
"HOWDY" WILCOX.

After Mr. Wilcox made his famous run he put his stamp of approval on the Kant-Skore Equipped Haynes 75 Speedster in the accompanying signed statement.

Mr. F. N. Nutt, Chief Engineer of The Haynes Automobile Company, put his official stamp of approval of the efficiency, light weight, and the close fit of the Kant-Skore Piston when he adopted Kant-Skore Pistons as standard Equipment for the Haynes 75 Speedster.

Kant-Skore Equipped Apperson 8 Established Six Official AAA World's Records.

Here is accomplishment. Here is proof of Kant-Skore superiority, speed, economy, and durability.

Does not such accomplishment and proof warrant your desire to install Kant-Skore Pistons in all jobs coming to your attention?

Immediate delivery on any standard or oversize on more than 600 models of cars and trucks.

REGRINDERS DEALERS, REPAIRMEN, a substantial and profitable business is being built with Kant-Skore Pistons. You can cash in too. Send for your copy "Establishing Six World's Records," addressing your request to Dept. K. A., The Kant-Skore Piston Co., Spring Grove Ave. and Hopple St., Cincinnati, Ohio.

Kant-Skore
PISTONS

WEIGH LIGHTEST · FIT TIGHTEST

Solely Manufactured and Patented by

THE KANT-SKORE PISTON CO.

CINCINNATI, OHIO. Factory Branch: KANSAS CITY, MO.

America's First Successful Close-Fitting, Light-Weight Alloy Piston

The Firestone salesman who visits you is interested as vitally in the re-sale or disposition of the tires in your racks as in securing your order. He comes trained in new and up-to-date methods of stimulating retail sales, and he brings a product that can be counted on to make new customers permanent ones—the tires that for twenty-two years have meant

Most Miles per Dollar

Firestone

There is no mystery about good oil

It must be made from crudes carefully selected for their "oiliness" and stability. These crudes must be refined to preserve their original characteristics and to make them pure.

In selecting crudes for Zerolene the Standard Oil Company has the advantage of its own large production of practically every type of crude. The company is not compelled to use any particular crude because it happens to be the only one available.

Crudes selected for Zerolene are brought to our refineries in special pipe lines. They are refined by our own patented, high-vacuum process which preserves their "oiliness" and stability.

No other refiner on the Pacific Coast uses any form of vacuum distillation. No other refiner in the United States uses as high a vacuum as this company.

Purity Essential

Zerolene oils are pure. This company has always considered the removal of all detrimental properties and compounds as essential in making Zerolene.

Because of their "oiliness," stability and purity, Zerolene oils give perfect lubrication, and permit the development of the maximum power, speed and gasoline mileage of the car.

more power & speed ~
less friction and wear ~
thru *Correct Lubrication*

The Standard Oil
ZEROLENE
For Motor Cars

Board of Lubrication Engineers

STANDARD OIL COMPANY
(California)

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 7 JULY 15, 1922 $3.00 PER YEAR

FINDS THE COAST DOING VERY WELL

Cole Official Who Expected to Find a Semi-Dead Region Learns of 43 Per Cent Registration Increase.

J. H. McDuffee, assistant general manager of Cole Motor Car Co., returned to Indianapolis recently after a six weeks trip on the Pacific Coast. He had learned something.

"Conditions on the Coast are most satisfactory," is the report made by Mr. McDuffee. "So far as the automobile business is concerned, the Coast has recovered just as strongly as the East, although it was the general impression that business would not take the upgrade with any appreciable momentum until next year.

"Official figures which have been given out show that there has been a very perceptible gain every month in the sale of motor cars. During the first four months of 1921 there were 13,766 passenger car registrations in Southern California. In 1922, during this same period, there were 21,653 cars entered, or a gain of 7887.

"In Northern California in 1921 there were 13,343 cars sold during the first four months, while 17,456 cars were sold during these months in 1922, a gain of 4113. For the whole of California this is an increase of 13,063 vehicles or 43 per cent over the 1921 figures.

"The automobile business is not the only industry that has enjoyed this volume increase. Business in general has improved steadily. Bank clearings for May were 21.4 per cent greater than for May of last year, while many towns showed an increase of better than 30 per cent.

"In Portland building permits for May were more than one million dollars over those for April and twice the figure for May a year ago. Lumber production in the Northwest is over 12 per cent above normal, and orders are far in excess of production.

"Our representatives all along the Coast are looking forward to a very busy summer and fall, and have ordered cars for delivery during these months to take care of the demand."

The Los Angeles trade story in this issue contains statistics of much interest, in relation to Mr. McDuffiee's surprise at finding Coast business so good. Northern California figures for June have not yet been issued, but by estimating them the following tabulation is available, to show registrations in California in the first half of this year exceeded the 1921 period by 44.7 per cent. In trucks alone, the increase exceeds 50 per cent:

	Nor. Cal.		Sou. Cal.	
	Cars	Trucks	Cars	Trucks
1921				
Jan.	1,593	199	2,003	213
Feb.	1,310	183	1,903	243
Mar.	5,525	720	5,729	747
Apr.	4,915	384	4,131	464
May	4,481	574	4,888	632
June	5,401	514	5,223	496
	23,225	2,574	23,877	2,795
Total, first 6 months of 1921...52,471				
1922				
Jan.	1,972	185	4,049	369
Feb.	3,719	481	4,895	604
Mar.	5,862	624	6,159	647
Apr.	5,903	629	6,550	677
May	1,030	1,018	7,118	1,065
June	7,200*	875*	7,436	882
	31,686	3,812	36,207	4,244
Total, first 6 months of 1922...75,949				

*Estimated.

Utah Provides for 50,000 Cars.

The state of Utah will place contracts soon for a total of 41,500 pairs of passenger car license plates, 7900 pairs of truck plates, 300 pairs of dealer plates, 100 pairs of motorcycle plates, 8000 truck load plates, 200 trailer plates, and 1000 chauffeurs' badges. The new plates will be smaller but of die stamped steel, and are expected to cost 14½ cents a pair or less, compared to 24½ cents a pair for the 1922 tags.

If you pride yourself on being a descendant from early settlers, prove it by paying your bills on time.

REGISTRATION IN OREGON PLEASING

Half-Year Figures Only 10,000 Less Than for All of 1921 and Outlook for Record Considered Good.

During the first half of the year, 109,000 motor vehicles were registered in Oregon. This was only 10,000 less than in all of last year, and was considerably more than for the first half of 1921.

A considerable number of vehicles have gone out of commission, but others have been held in storage and not used, the owners not wanting to pay the full year's license fee but expecting to take out licenses and use their cars after July 1, when the fee was cut in half.

Total receipts from license fees were $2,973,378 for the first six months of this year, or $819,537 more than in the first half of 1921. If the same proportion of increase from the first of the year to the last is maintained this year as last, there will be 130,000 motor vehicles licensed by December 31 this year as compared with 119,000 last year, and total license fee receipts for the year will exceed $3,250,000.

To Stop Sign Destruction.

Co-operation of the school authorities of Lassen, Modoc, Shasta, Siskiyou and Trinity Counties has been asked by the Northern California Counties Association in a campaign to prevent destruction of California State Automobile Association road signs. A circular was sent to each teacher, and special instructions to children given stressing the necessity for, and the cost of replacing road signs. The C. S. A. A. spends many thousands of dollars annually in replacing mutilated ones.

Remember, it takes longer to stop a truck than a passenger car.

TRAINED MEN MAKE THE REILLY TUBES

New Los Angeles Company's President Was Goodyear Office Boy Ten Years Ago, Now Own Boss.

Reilly Rubber Co., now operating in its newly erected plant, 2432-34 East 56th St., Los Angeles, made the first deliveries of its Mission red tubes June 1. J. R. Reilly, president and general manager, was with Goodyear 10 years, beginning as office boy. For a while he had full charge of sales in Brazil, and latterly was general sales manager of California Goodyear.

Fred Barber is plant superintendent of the Reilly Co. The plant represents a $50,000 investment and includes many new, highly efficient and economical appliances for inner tube manufacture, such as previously had been installed only in the big Eastern factories, it is said.

Mr. Reilly has announced that full capacity production, 1200 tubes a day, will be reached soon. Plant equipment includes two 60 inch rubber mills, one 66 inch 3 roll calendar, and a vulcanizing oven connected with a 50 horsepower boiler. The workmen already employed and to be taken on to provide for steady expansion will be confined to a class having wide experience in tube manufacture, who are able to take crude rubber and perform all the operations necessary to develop it into a high grade rubber tube product.

Yellow Taxicab Man on Coast.

For the first time in 5 years, H. C. Bradfield came to the Coast recently to look around as sales manager of Yellow Cab Mfg. Co., Chicago, which makes Yellow taxicabs, the Yellow Cab truck and the Ambassador car. Mr. Bradfield foresees a vigorous drive for the company's cabs, and the efficiency method by which their owners acquire a plethora of pelf; that is, by good service. More than 250 cities use the Yellows, though not all are yellow. Mr. Bradfield has in mind Pacific Coast additions to the list.

Durant-Star Plant Soon Ready.

The first Star cars to be seen on the Pacific Coast will appear late in July, it is stated by H. W. Trueblood, assistant sales manager of Durant Motor Co. of California with headquarters in Oakland. They will come from the Durant factory at Lansing, Mich., and the shipments will be made possible by C. W. Durant's purchase of the former Willys Corp. plant at Elizabeth, N. J., enabling the Eastern and Middle Western plants to devote their full respective productions to their own territories, which for the Lansing plant includes the entire country west of the Appalachian range in Pennsylvania.

Uncrated Cars Sent To Hawaii.

In your mind's eye, see a large number of cars outside a Southern Pacific receiving warehouse in San Francisco, where they have been unloaded from freight cars, in which they arrived uncrated. Here they are given gasoline and driven to the wharf of Matson Steamship Co., the only one, it appears, that can or will accept uncrated machines. Doing this saves $50 to $75 per car. Visualize the same large number of them as before, apparently filling the Matson Steamship Co.'s vast roofed wharf. Thence, towed by electric tractors, they go to the ship's side and are hoisted, with one cable attached to each wheel, by the ship's tackle and lowered into the hold, to be carried to Hawaii.

J. R. REILLY.
Mr. Reilly, now president and general manager of Reilly Rubber Co., which began making tubes in its own new Los Angeles plant recently, began with Goodyear 10 years ago as office boy, and when he left it was general sales manager of the California Goodyear Co.

Discovered Columbia River.

"Where rolls the Oregon"—recall the lines? So was the Columbia River called, formerly, though it was named as it is now 130 years ago, in 1792, when Captain Gray, of Boston, sailing a ship named Columbia, discovered the stream.

If we had to light our pipes by making fire as the ancients did, most of us would smoke as little as our motors do.

Hard After Violators.

Everybody's doing it—noticing a determination of authorities that a decrease in traffic law violations must be, shall be, brought about. In all parts of the country this is so. In Los Angeles, a few days ago, a sailor, ashore and speeding, was converted into a land lubber for 90 days, which period he will spend in a city jail notorious for its lack of room and superfluity of bugs. The county jail is better, but it is said those sentenced to it will not go there but to the rock pile. About $100,000 in fines was paid by Los Angeles motorists in June, and presumably they paid a large share of the $750,000 levied against 65,000 police court victims in the fiscal year ending June 30. Since about 100 vigilantes, motoring citizens appointed by the Automobile Club, began functioning not long ago, 10,000 warnings have been sent out, on the basis of what the vigilantes reported.

Was the State's Steepest Hill.

In the 60s, Toll House Road, in Fresno County, Calif., was said to be the steepest in the state. In the 80s its maximum was 23 per cent and it was 3.6 miles long, beginning at Toll House, 1910 feet above the sea, with the highest point 4000 feet elevation. On July 1 last, a celebration was held at Pine Ridge, a joyfest opening of the new road, shorter than the old one and having only an 8 per cent grade except a few hundred yards of 9.6 per cent. It is estimated 100,000 persons will use it this summer.

What a Girl and a Dort Did.

A caravan of 200 motoring Shriners left Oklahoma City May 21 for the San Francisco conclave. Among them was Helen Voss, 18 years old. She did all the driving of the family Dort, containing, with her, her father, mother and young brother, completing the more than 1800 miles without anything worse than a little tire trouble.

Otrich Handles American Chains.

S. O. Otrich, formerly engineer of the drive chain department of Link-Belt Pacific Co., San Francisco, has opened offices at 63 Second St., San Francisco, where he will carry a large and complete stock of American high-speed chains for automobile front end drives.

Climatically Great, the Fourth.

Climatically, July 4 was a walkover for the Pacific region, compared with other general sections of the country.

Yosemite Park was entered by 525 motor cars—100 more than previous one-day record.

PACIFIC FACTS BY FEDERAL RESERVE

Figures for May Show a Quick Rise in Automotive Supply and Tire Sales Following a Slow Spring.

The latest monthly report of the Twelfth Federal Reserve District, dated June 17, contained a wholesale tabulation covering 10 lines of business done by 8 to 26 concerns in each line, in 7 Pacific region cities. One table compares May, 1922 and 1921, the other the first 5 months of each of the years.

The May comparison shows for the whole district a 7.3 per cent decrease in automobile tire sales, the only other decrease being 2.5 per cent, in shoes. Automobile supplies increased 5.7 per cent; agricultural implements, 51.4 per cent. For the 5 months, tires showed a decrease of 8.8 per cent, and automobile supplies 7.7 per cent; agricultural implements, 11 per cent. Evidently the improvement was registered as May approached. In the 5 months period every city showed decrease in supplies sales, ranging from .9 per cent in Los Angeles to 17.1 per cent in Salt Lake City. In the same period only two cities had decreased tire sales, San Francisco and Spokane each 5.3 per cent,

In May, every city showed increase compared with May, 1921, in automobile supplies, ranging from 9.1 per cent in Los Angeles to .08 per cent in Salt Lake City. San Francisco gained .6 per cent. Tire sales in May showed decrease in only one city—Seattle, 14.8. Salt Lake gained the most, 60.1 per cent, with Spokane, 13.6, next; then San Francisco, 9.1; Portland, 6.4; Los Angeles, 5.1.

Consider Catalina.

Catalina Island, some 20 miles off shore from Los Angeles, is worthy of attention from motorists, thanks to millions of gum chewers that enabled William Wrigley, Jr., to make the highways of the "magic isle" attractive. From high points on a clear day, it is said, Old Baldy, some 80 miles away on the mainland, can be seen.

Adjusting Their Lights.

We all see according to our lights and what some of us don't know about using our lights—meaning headlights in this case—is what is keeping the illuminating engineers of California Automobile Trade Association so busy that it has taken them since early March, working south, to reach the Los Angeles field. With the enthusiastic sanction of the Motor Vehicle Department they are appointing adjusting stations, at which motor car owners may—aye, must, say the police—have their headlights fixed so they will shine as they should, and no other way. Glaring headlights simply must be stopped, is the declaration of Chief Oaks of the Los Angeles police force. To which many thousands say, amen.

Pelletier to Put in Much Time Here.

E. LeRoy Pelletier having established a branch of his well konwn Detroit advertising agency in Los Angeles, the Detroit office, in charge of "Roy Junior," (Pelletier's son), will be maintained for Eastern business, and the Los Angeles office, in charge of Benjamin Sosland, will handle the West. Mr. Pelletier, Senior, will spend most of each year on the Coast. It will be recalled that he was Henry Ford's first advertising manager. Later he was with Walter Flanders enterprises for 8 years, and for the past 7 years has been identified with the advertising of Reo Motor Car Co. He was one of the six men who started the old E-M-F Co.

A LIFE SAVER.

If very thirsty on land or sea and the canteen empty, exhale into it, so conserving the 85 per cent of water normally in your system. Dr. Alexander Graham Bell, telephone wizard, has invented a canteen with two tubes attached to its top, one to carry in the breath, one to let it out on the desert air, its distillation having dropped into a cup fastened below the canteen. Any device on the same principle may save a life till help arrives.

What happens to the breath, even of a boozer, is what happens to a man sometimes, when he visits a mission; that is, it goes in wet but comes out dry.

To Fine Yucca Hounds.

Los Angeles County has passed an emergency ordinance providing a $50 fine and several days in jail for ye yucca hounds—the same being human beings who uproot and carry home and set up against the back fence, to die, the beautiful yucca plants that are the white-plumed sentinels of the foothills.

Oregon Outlaws Ad. Signs.

Advertising signs are to come off Oregon state highway rights of way, also off private land on such roads if land owners consent. It is claimed a motorist ordinarily will drive 140 feet while reading a sign of 10 letters—far enough to drive off the road or into another machine.

Skyline Route Rivalry.

The routing of the Skyline San Francisco-Santa Cruz Highway, beyond Saratoga Gap has developed rivalry. Two large delegations appeared before California Highway Commission in San Francisco, recently. San Jose, Watsonville, Gilroy and other cities wanted the route to continue from Saratoga Gap on along Castle Rock Ridge to Woodwardia, which is on the present state highway from San Jose to Santa Cruz via Los Gatos. Residents of Boulder Creek and San Lorenzo Valley set forth the advantages of a route running down that valley. Mention also has been made of a third route from Saratoga Gap to Big Basin, thence via Davenport and the sea level to Santa Cruz. A delegation from Santa Cruz will appear before the Commission June 15, at Sacramento. The routing it favors has not been announced.

Road Paved with Silver and Gold.

Motorists passing along the Washington state highway between Valley and Chewelah, 10 miles north of Seattle, like the charioteers of the ancient Persians, Syrians and Egyptians, literally drive over a silver highway, which, were it run through the mill, would net thousands of dollars worth of silver bars, according to authentic reports. In building this highway the contractors opened a quarry of quartzite, which was crushed and spread over the road as a macadam surface. Investigators took samples to an assayer and learned that perfectly good silver ore, running $2 or better to the ton, with traces of gold, had been used on the road. The job called for 7500 tons of the ore. At this figure the roadbed alone is worth $15,000 in silver or gold.

Seven-Direction Traffic Control.

At the junction of Market, Montgomery and Post Sts., San Francisco —possibly the busiest spot in the city— traffic is controlled by a police officer pressing on a foot pedal, actuating an electrical device attached to a trolley pole. A whistle is blown and red and green lights, meaning "Stop" and "Go," are shown at the same time. The device serves seven different lines of traffic, each separately.

Boy Scouts Help Pick Up Things.

Under leadership of the Automobile Club of Southern California the Boy Scouts of the southern section of the state, ably seconded by the school children, have been enlisted to clear roads of glass, nails, thorns and other puncture producing nuisances. The idea has spread rapidly.

TACOMA ADDS TO MURPHY'S PURSE

Irishman's Split-Second Judgment in Taking Enough Time to Put on Two Tires Instead of One, Pays.

Jimmie Murphy, in his special car propelled by the marvelous motor Miller makes in Los Angeles, won the 250 mile race on the 1¼ board speedway at Tacoma, July 4, in 2:33:55.40, averaging 97.45 miles an hour and adding the $7500 first prize, and some extras, to a 1922 bank roll said to exceed $150,000. Oh, pretty fair, for a few races in the course of a season.

Tommy Milton, Leach special, was second in 2:34:01.40, averaging 97.39 an hour.

Roscoe Sarles, Frontenac, was third in 2:42:40.80.

Jerry Wanderlich, Duesenberg, was fourth, 2:44.08; "Howdy" Wilcox, Peugeot, fifth, 2:45.34; Harry Hartz, Duesenberg, sixth, 2:47.10; Art Klein, Frontenac, seventh, 2:48.11; Joe Thomas, Duesenberg, eighth, was flagged down without completing the 250 miles.

Of the 11 starters, the remaining three were served as follows:

Eddie Hearne, Disteel Duesenberg, out in 19th lap; broken connecting rod.

Cliff Durant, Durant special, out in the 59th lap; broken rear axle.

Ralph Mulford, using Frank Elliott's Leach special, out in 100th lap; broken rear axle.

—

Milton led. Murphy stayed with him. Both were overdue at the pit for tires. Finally Milton did stop, in the 65th lap. Then Murphy led for 3 laps, and then he went to pit and put on two rear tires, instead of only one, as Milton had done. The extra seconds Murphy put in at the pit proved an excellent investment. Milton led to 113 laps and was 43 seconds ahead of Murphy. Then he had to stop for another tire, and that enabled Murphy to win.

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It was a wonderful finish. When at 244 miles, with Murphy 10 seconds to the good, Milton went like old Boreas and the crowd went wild, and if it had been a 260 or 275 mile race—but it wasn't, and in a twinkling, almost, Fred Wagner gave Murphy the victor's flag.

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Second prize was $5000; third was $3500; fourth, $2250; fifth, $1500; sixth, $750; seventh, $750.

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Barney Oldfield paced the preliminary lap. In the getaway, Milton led, with Hartz, Murphy and Sarles following. Wilcox went to pit with mechanical bother in the fourth lap, losing a lap. At 10 laps Milton still led, with Murphy behind him, Hartz in third place, Sarles fourth.

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In the 11th lap Hartz went to pit with a broken steering knuckle, lost 10 laps, and couldn't regain 'em. The crowd liked his plucky perseverance.

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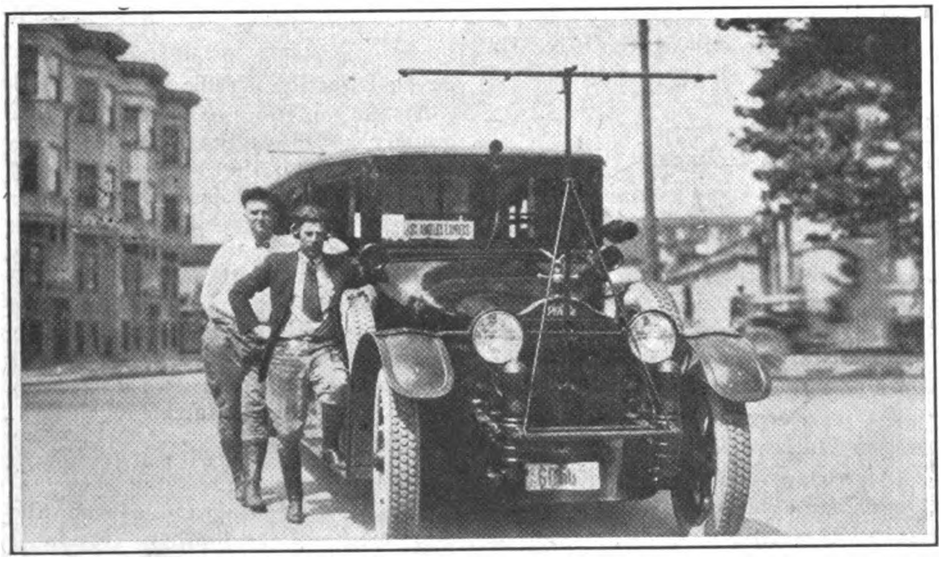
In the qualification tests, July 2, Murphy's pace was a shade under 109. Hartz did 107; Milton, 106; Durant, 104½; Sarles, 104; Thomas, 103; Elliott, driving for Mulford, 102½; Wilcox and Klein, each 97. Hearne and Wanderlich qualified the next day.



CALIFORNIA STAGE PASSENGERS ENJOY RADIOPHONY AS THEY ROLL ALONG.

Recently California Transit Co., operating motor stage lines in Northern California, sent the first radio-equipped stage out of Oakland to Sacramento. with encouraging results. With only a two-stop short wave length receiving set, and handicapped by a low aerial, nevertheless concerts broadcasted from San Francisco and Oakland were picked up as far as Martinez. The stage driver operates the set and the passengers are served with an auricular variety ranging from the price of oats to some singer's high C. The picture shows how the aerial is attached to the car.

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Wanderlich was doing the test nicely at 100 per, July 2, when a tie rod straightened out, threw the front wheels out of line, and the car spun around three times and hit the rail. Jerry was O. K. and the car was fixed.

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A. A. A. championship points awarded to the Tacoma race were: First, 500; second, 360; third, 140; fourth, 80; fifth, 50; sixth, 35; seventh, 25; eighth, 15; ninth, 10.

—

If Murphy's putting on two tires instead of one was due to his wits, he has good wits—split-second judgment, one Tacoma scribe, C. R. Maybin, called it. He declared it was the headiest Tacoma race since Rickenbacker won in 1916.

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Murphy, of course, heads the A. A. A. championship list for the season. He won four big races this year—San Carlos, Indianapolis, Uniontown, Tacoma.

—

Peter De Paolo, newlywed, entered but withdrew to answer a call from Georges Ballot, in France, to compete in the Grand Prix road race in Alsace-Lorraine, July 15.

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Thomas' Duesie developed an awful cough, but he kept on.

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The track was rough, and gave up splinters liberally. Milton got one sliver. Johnny Bresnahan, Hearne's side kick, was zipped on the forehead by a small rock.

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The fastest lap was the 113th, done by Murphy at 104. His average beat Milton's of last year, 96.4, which was track record.

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It was an ideal day, and the crowd got its money's worth.

A. A. A. Championship List.

Even if Jimmie Murphy does not win at Cotati, August 6, nor November 11, nor at Los Angeles, November 30, he should not worry about the A. A. A. championship point contest. He is too far ahead in it to be caught up with. Including the 500 points he won at Tacoma, July 4, his total now is 2850. Others rank as follows: Hartz, 1225; Milton, 940; Elliott, 375; Hearne, 320; Sarles, 280; Wanderlich, 254; Bordino, 195; Klein, 162; Mulford, 160; De Palma, 155; Haibe, 109; Thomas, 99; Fetterman, 83; Wilcox, 50; Alley, 35; De Paolo, 28; Miller, 25; Vail, 21; Koetzla; Shafer, 17; Morton, 15.

On its way—the downtown left turn.

RACING THRILLS EASTERN OREGON

Early Trail Blazers' Memory Honored By Festivities at Baker on Glorious Fourth and Day Before.

Automobile racing, full of thrill if not of sheer speed, helped Eastern Oregon celebrate its Old Oregon Trail and Pioneer Pageant, on July 4 and on the day before.

"Connoozers" in any "game," including that of automobile racing, may be inclined to smile at the average pace and scoring and timing, and all that, of a speedfest such as took place in the lively town of Baker, but if they do they lack appreciation of the human humors, the basic, spontaneous kind that grow and have their sympathetic being not in large populative centers but in the country, where the real people are.

Of all the good things Baker set forth, in commemoration of the trail blazers of olden days, the automobile racing at Pollman Park, under the auspices of the Baker County Automotive Association, was the best; and though Jack Ross of Seattle cleaned up, in conflict with local men, Baker gave him high regard for the entertainment he supplied and for lowering its track record for a mile to :64.4, in the tryouts.

Ross had a Stutz and a Ford special and the former did the record breaking, which was at 55.55 miles an hour. There were other specials—Hudson, Fronty Ford, Williams, Studebaker, and so on. In the 10-mile race, July 3, won by Ross's Ford special, driven by Cohoe, in 13:13, Harry McIntosh's Fronty Ford took the lead but, on a turn in the first lap, skidded, tore down 20 yards of fence, plunged through a ditch to the outer regions, and was undamaged but the driver got a chin scratch. A spill off a speedway could not have given the crowd of several thousand more of a spectacle.

Jack Ross himself won a 10 mile race with his Stutz, in 12:10.2, but two Hudson specials, fighting for second, provided the chief excitement.

On the Fourth the park had the biggest crowd in its history, about 4500. The races yielded Jack Ross's Stutz $1050; his Ford special $350; Southard & Shinn's Hudson, $450; Williams special, from La Grande, $75 and 30 gallons of oil; Masters & Perkins' Studebaker, $235 and 15 gallons of oil; and so on. In the exhibition of driving by women, the winner won 100 gallons of gas, the first day. On the second day the winner got $50.

In two contests on the Fourth, Jack Ross, "sensational race driver of the Coast," was it. His Stutz took the 15 mile event in 18:02. It also took the 25 mile free-for-all, in 37:07. In these and other races there were visits to the pits, tires were thrown and all varieties of racing experiences were had.

During the program, Umatilla Indians paraded before the grandstands on their horses. Pathe and Fox news service cameramen took motion pictures of the various features.

Track Publicity Compared.

Publicity pays, when it is good, which word's meaning is in no way related to "bunk." San Carlos holds the laurels, if such they be, for announcements of the "regardless" sort. Cotati does not know what publicity is, apparently. Tacoma either does, or has unusual newspaper co-operation in getting good preliminary matter to the public. Uniontown appears to know nothing of the value of the printed word. Indianapolis has Steve Hannagan, unbeatable, taken by and large. Yet the present Los Angeles publicity, being sent out long in advance of the Thanksgiving Day race, has better literary quality than any and is telling the people in a wide area, in a way that ought to convince and draw them, that the speed stuff concocted in the Beverly bowl is the best served from any wooden, brick or other speed bowl there is on this particular speck in the solar system.

VISOR IS WISER.

If we look back a few years we can still see the now ludicrous picture of the begoggled motorist of the past, with his exasperated headgear and flowing linen duster. Today, all we do to give us the necessary protection from the sun's glare, and to assure us of clear vision in driving, is to purchase a windshield. If you ever have driven behind a visor you never will drive without one. Not only is it a blessed comfort in driving against the sun in the early morning or evening, but it is mighty good insurance against accidents, for in rainy weather it prevents in a great measure the clouding up of the windshield. From every standpoint —of safety, of comfort, of both yourself and your passengers, there is nothing wiser than the purchase of a visor.—Albertson Motorlog.

Next Race at Fresno.

Fresno's next race, 150 miles, will be run on Saturday, October 28. The Raisin Empire's late-in-the-year race last year was on October 1.

State of Washington has 927 motor stages.

A Woman's Daring Durant Stunt.

Declared by those who have seen it to be one of the most amazing pictures of its sort ever filmed, a 2 reel melodrama of the Mexican border is being shown by Earle C. Anthony, Inc., Durant distributor in Los Angeles and San Francisco. A girl and a car share the stellar roles, and the manner in which Marjorie Duquesne, the heroine, puts her Durant Four over some of the roughest country imaginable is only less remarkable than the ability of the car to go where she sends it. In making the picture, which was filmed near the Mexican border, in some of the wildest and most rugged country in California, Miss Duquesne hurdled boulders with the car, crashed through brush, climbed rocky hills and forded quicksand streams in a fashion that few masculine drivers would care to attempt.

Driving over a rough hilltop in one of the scenes, Miss Duquesne strikes a group of boulders and leaps through the air, 17 feet. The camera man barely escaped with his life, as the car's course was deflected somewhat and almost hit him when it alighted. At another time, on a very steep hillside, it slipped down the hill and hung up on a huge boulder weighing fully a ton and a half. Miss Duquesne fought the car back and forth desperately while two cameras ground away, and eventually dislodged the boulder and rolled it clear off its base and freed the car.

The Durant which was used makes a "personal appearance" on the Anthony salesroom floor when the picture is shown. It shows plenty of evidence of the terrible usage it received, and the picture shows many of its scars in the making.

Remarkable Kissel Record.

Driving a Kissel across the continent four times, plus 10 years of hard usage since he built it in 1912, with a total mileage exceeding 300,000 miles, at a cost of $50 total repair expense, is the proud record of C. M. Gray, Del Mar, Calif. The only reason he don't trade it in for another Kissel, he says, is that it is good for another 100,000 miles at the least. The speedometer has made three complete revolutions and is due for a fourth before long.

How to Light a Match.

Going camping? May be breezy. If so, to light a match, face the wind, cup your hands with their back to the wind, then with one hand light the match on something very near, cup hands again and be sure to have the lighted end of the match toward the wind. That gives the fire wood to feed on.

SAN LUIS OBISPO HOLDS RACE MEET

A.A.A.-Sanctioned Dirt Track Affair a Magnet for Southern California Men and One of Them Passes Out.

San Luis Obispo, Calif., had a 40 mile automobile race as one of its Glorious Fourth features. The beautiful little city, set among velvety looking hills, scenically unlike any town could be except in that peculiar California environment, has a live lot of automotive men, and they obtained entries from relatively far distant places—Redlands, Pasadena, Los Angeles. The final forty was won by Fred Luelling, local man, in a Ford special, in 34:48, averaging 69.44 miles per hour. Whyte Womack of Pasadena was second by 3 seconds, a San Luis Obispo "Hup" special piloted by A. D. Wallace was third and a Redlands Ford special operated by Ed Myers finished fourth.

A considerable number of cars entered, and 15 qualified by doing the mile on the recently completed mile dirt track in 55 seconds. These competed in two preliminary 10 mile heats, to eliminate all but four in each heat. In one, Horace Wallace averaged 73 miles per hour in a Ford special. He had engine trouble in the final.

The racing had A. A. A. sanction and nobody was hurt in the contests, but two days before Enos Bello, of Santa Maria, hit a colt in practice and was killed; and the day after that Harry Hooker and a Mr. Colk, both of Los Angeles, blew a tire and were thrown about severely.

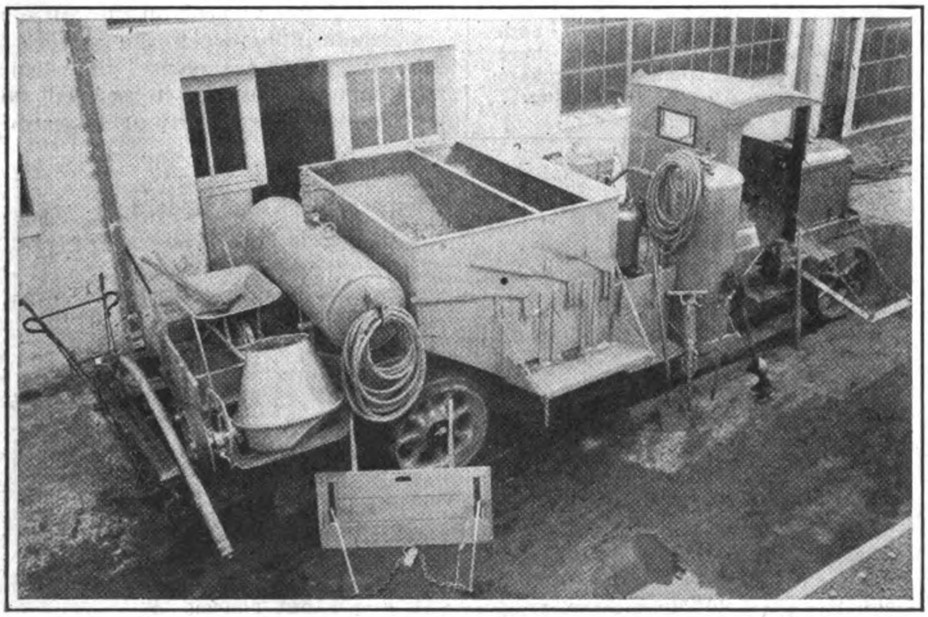
Prizes for the preliminaries were $100, $75 and $50; in the final, $500, $300, $150 and $100.

An Ingenious Motorcycle Officer.

San Francisco has an ingenious motorcycle officer. Recently he found a car, apparently stolen, abandoned in the suburbs. Instead of calling for a tow car he took it to the station himself without getting off his two-wheeler. He rode alongside the car, put his right foot on the running board, put his right hand on the steering wheel and steered it, and guided his motorcycle with his left hand.

This same man is credited with stunts that "sound to me," etc. When he discovers a "guy" driving with one hand, and encircling a girl with his other arm, this happens: The officer rides alongside and, without having the car stopped or leaving his saddle, he runs a tow rope from the head of his motorcycle to the lower part of the car's windshield, then leans over, makes out a tag, hands it to the "boob," tells him to appear in court and casts loose.

Eighteen states tax gasoline, all 1 cent a gallon except Oregon, in which 2 cents per gallon is levied.



A REMARKABLE KERN COUNTY HIGHWAY MAINTENANCE TRUCK.

Stanley Able, chairman of the board of supervisors of Kern County, Calif., is partly responsible for a highway maintenance truck designed and built by Fageol Motors Co., Oakland. Its success is so great that Fageol will offer others like it, elsewhere. It is a veritable warehouse and machine shop on wheels. It carries a concrete mixer, centrifugal pump, tar or road oil heating tank of 50 gallons capacity, Rix air compressor of 80 cubic feet per minute capacity, pneumatic jack hammer, assorted chisels, tampers, etc., pneumatic post hole digger and hose, large grading plow, drag or grader for shouldering up, steel wheelbarrow, complete paint spray outfit with hose and connections, drawbar attachment for hauling trailers, water tank of 150 gallons capacity from which contents can be withdrawn by gravity or under pressure, combination material bins, holding 1000 pounds of cement, a cubic yard of sand and 2 cubic yards of gravel or rock, syphon nozzle for spraying hot tar or oil, and considerable other equipment! There is gravity feed from all bins, controlled by hand-operated gates, to the mixing apron.

City of Future Visioned.

A. F. Osterloh, vice president and general manager of Goodyear Tire and Rubber Co. of California, has received from Akron a copy of an address, delivered there by P. W. Litchfield, Goodyear's factory manager, before the East Akron board of trade, which showed a large scope of vision. Mr. Litchfield said in part:

"Business is on the way upward. The rubber business was one of the first to suffer and is the first to recover. Tire manufacturing, which is approximately 75 per cent of the rubber business, is on a sound fundamental basis.

"In the spring of 1920 the monthly wage average at Goodyear was 250 per cent of the 1914 wage, with the cost of living 215 per cent of the 1914 cost. Today the purchasing power of the average employe is approximately 30 per cent greater than in 1914, and approximately 20 per cent greater than in any year since 1914 except 1921. These facts spell sound prosperity for prospective business in general.

"We have merely scratched the surface of the tire business for large passenger buses and freight transportation trucks. Even during the recent depression, the increase in the use of big buses has been really surprising.

"As I see the city of the future, the very near future, it is going to be a city of smooth paved streets, without rails or wires. Transportation can be furnished more quickly as cities expand. Just as soon as business is there, the new form of transportation is going to be there too. Modern cities will be quick to take advantage of that new and better, as well as cheaper form of transportation.

"A year ago was a time for extreme co-operation, and that is equally true today, but the rewards of optimism and courage are apparent already. The rubber industry is going ahead on these lines, and other business must follow the same direction."

To Make Fogged Roads Visible.

Recently, in the interest of safety, W. S. Clayton of San Jose, a director of California State Automobile Association, suggested that the association mark with white lime, or other suitable substance, the outer edges of the paved highways on main routes where fog obscures the road from motorists. The suggestion was referred to the committee on new activities.

The association also is investigating the feasibility of erecting signs at the entrances to various municipalities, directing tourists through the towns and onto the main arteries leading out of them.

CLUB'S LEGAL AID WORK IS ENLARGED

C. S. A. A. Names Attorneys for Several Districts and Tells What Service Is Given Its 30,000 Members.

Organized two years ago, with Director Percy E. Towne as its directing head, the legal department of California State Automobile Association is now being extended to permit of legal advice to members throughout Northern California. The department advises the 30,000 members as to the law covering the operation and ownership of their cars. George E. Sandford is general attorney for the association and C. J. Creegan has been appointed as an associate attorney in San Francisco. Attorneys are now being appointed to represent the legal department in the larger district offices as follows:

A. T. Shine at Oakland, George A. Nicholson at San Jose, Johnson & Lemmon at Sacramento, Stanley M. Arndt at Stockton, Thomas C. Boone at Modesto, and Lindsay & Conley at Fresno.

In the near future additional attorneys will be appointed to represent the district offices at Redding, Chico, Vallejo and Salinas.

The legal department, through its attorneys, has been active in observing traffic conditions in and out of San Francisco, and in many cases actually participating in prosecuting or defending flagrant instances of traffic violations. Members very often are represented in the police court and their cases are disposed of satisfactorily without their appearance being required, in all instances where a plea of guilty is entered.

The attorneys are constantly attempting to point out unreasonableness that may exist in any laws and drafting new ones. For this purpose the association is represented, through its attorneys, at each session of the legislature and every interest of the motorist is kept in mind in attempting to assist in framing laws affecting them.

The legal department also takes care of all accidents and collisions of members who are not insured, up to the point of trial. In these cases the member makes a report of his collision and the case is investigated by the department attorneys and a decision as to liability is rendered. Should the facts show the member is guilty of negligence, proximately and solely causing the collision, he is so advised. If it appears that the other party should be held liable, the member's case is presented and every effort made for amicable settlement. If litigation is unavoidable the department attorneys so advise, and the member must then retain his own attorney to take his case to court. Advice is also given as to any interpretation of the motor vehicle act or any other law of the state or any municipality which has to do with the operation of automobiles.

As to Placing License Tags.

One out of every ten car owners in Los Angeles—a proportion probably good for other Coast cities also—violates the state laws regulating license plates. The Automobile Club of Southern California has released a flock of posters showing the various illegal positions of tags. The posters tell it is against the law to have plates obscured, dirty, or bent so that numbers are hidden. Crank handles and extra tire carrier supports must not hang in front of the plate, and bumpers, front or rear, must not conceal it. Many motorists are forgetting that a light at the rear must illuminate the plate at night. Plates must be at least 16 inches above the ground.

DETROIT'S RECORD.

Detroit is making a business of enforcing law and is succeeding. In 1921 there was a decrease in law violations of 58 per cent as compared with 1920, and a decrease of 62 per cent as compared with the average of five years beginning in 1916.

How was this brought about?

The question can be answered in one word—co-operation.

There was co-operation between the courts and the enforcement officers, and between enforcement officers and enforcement organizations and citizens generally.

In short, obedience to law is becoming the political religion of Detroit.—American Issue.

Good Use for Overhead Rail.

An overhead steel rail extends the entire length of Don Lee's San Francisco repair shop. By means of this and 3 ton chain hoists, the end of a car is lifted up and placed on stands. For raising front ends there is a special grab hook which hooks around the brace on the front of the chassis. For raising the rear end of a car carrying one or more spare tires, a special cable is provided whch passes around the frame of the car. The cars are supported on special steel stands, some being permanent as to height and others adjustable by holes and pins. Work benches extend the entire length of the repair shop, being arranged ideally with reference to the overhead rail.

Flat Rate Towing Charges.

Good news is contained in the announcement of California State Automobile Association that it has arranged for flat rate towing charges for its 30,000 or more members in the northern and central sections of the state. This is the result of a meeting of association officials and representatives of the official C. S. A. A. garages. For the year 1922 the following charges have been agreed upon:

For towing car and equipment, one driver, per hour, $4; from 6 a. m. to 8 p. m., and Sundays and holidays, per hour, $5; minimum charge, towing car and driver, $2; from 6 p. m. to 8 a. m. and Sundays and holidays, minimum charge, $2.50; additional men on any job to be charged for at regular shop time. Also, official garages have agreed to maintain sanitary rest room facilities for tourist travel. The association has inaugurated free touring service for both its own members and those of the Automobile Club of Southern California over the two northern routes into Yosemite National Park—the Chowchilla Mountain-Wawona, and the Big Oak Flat roads.

Bay City Labor Saving Idea.

The boxes in which passenger cars and trucks are put up are too large to be carried under one's arm; in fact, formerly it took eight men an hour to get each box from a freight car to the pier, alongside the steamer, in San Francisco. Now four boxes of trucks are handled per hour, with little effort by the men. First a roller is put under the box, a cable is fastened around one end of the box, the other end of the cable being attached to an electric motor which then moves till the cable goes taut with a jerk, thus moving the box several inches. This is repeated till the box is well onto the wharf. Then a very low, strong 4 wheeled platform is put under the box, and the tractor hauls the box to the steamer.

Found Rat's Nest in Water Jacket.

Finding a rat's nest in the water jacket of an automobile is a story that taxes credulity, but here's the story as told by Ralph Shelley, Pacific Coast representative of the Dort Motor Car Co.:

A Dort dealer in the Middle West had a cut out chassis on exhibition. He was absent from the store several days and upon his return noticed some rubbish sticking out of the water jacket. Reaching in he pulled out a rat's nest and a family of newly born rodents.

Now Shelley is using this story to illustrate how much cooling space the Dort has around the cylinders.

ADVICE TO THOSE GOING TO EUROPE

Taking One's Own Car Is Cheaper, and Better Otherwise — American Express Co. Supplies Information.

A. C. Marston, 752 South Broadway, Los Angeles, district passenger agent of American Express Co., writes about touring abroad as follows:

"The laws of most European countries now demand payment of a duty of 45 per cent or 60 per cent of the landed value at the European port on all automobiles taken into the various countries by the tourist. In addition to the duty, there usually is an unpacking charge at port of anywhere from $50 up, depending on the service performed, and certain payments to various countries, as well as road taxes and other items which vary according to the country.

"The American Express Co. can arrange the customs entry and payment of the duty under an arrangement whereby the duty is refunded when the automobile is exported from the country. We will also assist the passenger in every possible way in dealing with European governments and keep him advised as to government requirements. This, of course, is done by our foreign offices, located in every principal city in Europe, after the tourist arrives abroad.

"From reports we receive, it is money well spent for the tourist to take his own car with him if he contemplates doing much touring by motor; for motor hire is an expensive item, and the cars which are left, as a rule, are not very satisfactory.

"If we are given information as to the countries which the motorist intends to visit, the make of his machine, value, kind—whether touring or inclosed, weight, length, breadth, height, and whether or not on wheels—we will supply him with the complete estimate of the cost of shipping, and other information."

Interesting Colorado Facts.

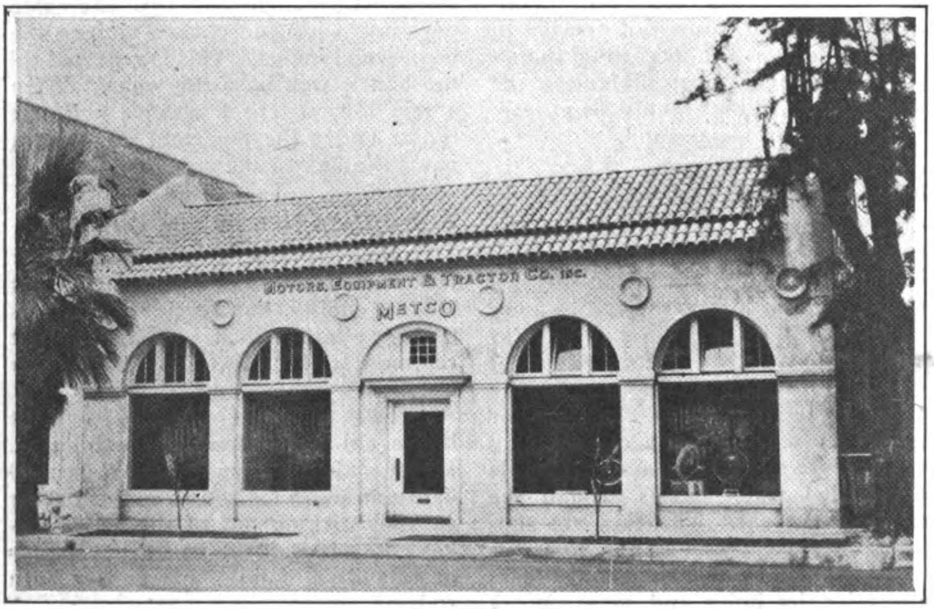
Colorado, with a population of 1,000,000, had half that many rail and motor tourists in 1921 who remained from one to three weeks and spent $35,000,000. Colorado's 1921 gold output was only $8,780,000.

Denver is the gateway to 12 national parks and 32 national monuments.

Skeletons of huge reptiles that, millions of years ago, inhabited the shores of an inland sea where the Rockies now stand have been excavated in Dinosaur Mountain near Denver.

Rocky Mountain National Park, in Colorado, had 273,737 visitors from every state in the Union last year, which was more than the combined attendance of Yellowstone, Yosemite, Glacier, Grand Canyon and Lassen National Parks.

There is an automobile circle trip out of Denver that takes the traveler from temperate to arctic climes within a few hours, calls for an overcoat in the middle of summer, and acords opportunity for the picking of wild flowers in among the snow banks.



NEW HOME OF THE MOTORS, EQUIPMENT & TRACTOR CO., LOS ANGELES.

Motors, Equipment & Tractor Co., 1341 South Hope St., Los Angeles, is very busy in its new home, occupied since May 1. The company distributes Tuarc steel wheels on the Pacific Coast. It also markets the Metco line of valves, pins and oil rings.

Fine Portland Establishment.

Remodeling of the new home of Braley, Graham and Childs, Dodge Brothers distributors for the Portland district, is completed and the structure is regarded as one of the finest automobile establishments in Portland. The 4 story building, measuring about 100x100 feet, formerly was occupied by Cook & Gill Co., Portland distributors for the Paige, and was secured when the Paige people arranged to erect a new building.

The main feature of the change is one which will provide a quick service department on the first floor. A driver, coming directly into this department from the street, has his car troubles diagnosed by an expert. If the difficulties are minor, or service is all that is required, the car is taken care of at once. If the work requires several hours or perhaps days, the car is sent to the second floor, where the heavy repair work is done.

Another change which is of interest to dealers is the one making the third floor the used car department, not only for reconditioning but for selling. The prospective purchaser is able to look over the various second-hand cars in stock, and to see exactly what the firm does to put its used cars into shape.

Earl Heym, who has been with the Dodge Brothers cars a dozen years, first at Spokane and later in Portland, has been placed in charge of the service department under the new arrangement.

Buried Streets of San Francisco.

A part of San Francisco extends into a region of sand dunes, and their continuous shifting and irresistible progression is one of the most serious problems the city has to face. In many cases they move across a street so as to entirely bury it and make it impassible.

The city has tried many remedies, but none has proved entirely successful. The best so far is the combined use of a bulkhead and the growing of Texas grass on the sand back of it. The bulkhead alone, does not solve the problem, being buried by sand in places. Texas grass, when once started on the sand, seems to grow about as fast as the sand piles up, the top of the grass always projecting a little above the sand. It continues to grow in this manner even though sand may reach a depth of 8 to 10 feet above where the grass was planted originally.

With the entire building up of a section, and cultivation of the land surrounding the residences, a large part of the diffculty probably will disappear, but for the present it is a problem.

PORTLAND RECORD BROKEN ON JULY 1

Lower License Fee Is One Reason for Fine Registration, But Business Is Good and Getting Better.

If the opening day of July in the Oregon country may be taken as a criterion, the present month will be the greatest in the history of the automobile business for Portland and its surrounding territory, not excepting the frenzied period of 1920, when cars were being sold as fast as they could be obtained from the East.

All records for one day's registrations of new cars for Multnomah County (Portland) were shattered on July 1, when 354 licenses for new cars were taken out. It was far ahead of any previous one-day registration of the year, and gave July a flying start toward being the banner month of the year.

Of course there was a reason. On July 1 the state automobile license fee was cut in half. As the license in Oregon is a considerable item, many purchasers had been postponing buying cars so as to get the reduction. Others had purchased cars and had them held by dealers.

However, the splendid July 1 list would have been impossible a few months ago. It means business has come back in the Portland territory on a sound and substantial basis. Many dealers look for a record autumn business, although expecting midsummer will be rather light, as it generally is. Stress already is being placed on the closed car business in anticipation of the fall demand.

Due to heavy sales the past several weeks, some of the larger dealers already are out of cars, and shortage in some lines looms. Dealers have been rushing wires to the factories to increase shipments. Some have met with success, others have been out of luck.

Demand for second hand cars has improved materially and that situation is in better shape than for more than a year. A substantial number of the sales are clean deals, with no trade-ins, and much less difficulty is had in turning over second hand cars taken in.

Oregon Motors, Inc., is the latest automobile company to enter the Portland field, having been formed early in July to handle the Chandler and Cleveland lines. E. O. Armstrong, who has been in business a dozen years in Portland as head of Columbia Paint Co., is president. A. H. Knaus is vice-president and sales manager. Mr. Knaus was Chandler and Cleveland dealer in Portland several years ago, but sold out and has been in business in California. The line was secured by the new company following a Portland conference with Vice President Graham of the Chandler factory, and the retirement of Twin States Motor Car Co. as distributor. The new company has the same quarters as the Twin States had on upper Washington St.

L. M. Shaw, assistant general manager of the National Automobile Dealers' Association, was a recent visitor in Portland, and was a dinner guest of the dealers. By a coincidence Harry G. Moock, assistant sales manager of Hudson-Essex and former manager of the dealers' national body, was in town at the same time and was entertained also.

Portland's Tire Factory Under Way.

Machinery and equipment valued at more than $100,000 will be shipped immediately from Eastern centers to Portland for the new Columbia Tire Corp. plant there. R. A. Wurzburg, president, with Lewis Wyman, treasurer and purchasing agent, returned recently from a trip to the east. The company already has a $100,000 plant well under way, and expects to start installation of machinery by late summer. The company will turn out the Columbia tire, and will operate Portland's first tire plant.

MOTOR MOTTOES.

From the National Automobile Chamber of Commerce Bulletin.

Still motors run sweet.
Home is where the car is.
A soft tire turneth away cash.
While there's gas there's hope.
Fools pass on hills and curves.
A wise driver maketh a glad auto.
It is better to be slow than sorry.
Declines make wheels go faster.
Dry springs squeak louder than "birds."
To speed is human; to get caught a fine.
As the wheel is bent so the car will go.
Where there's a nail there's a puncture.
A body's as old as its paint; a motor's as old as it pulls.
Spin and the world spins with you; stall and you stall alone.

Gear Ratio 170 to 1.

Buffalo tractor trucks, introduced recently on the Coast by Cott & Brodeur, 5808 Moneta Ave., Los Angeles, have a low gear ratio of 170 to 1, and ten speeds forward and four reverse, instead of 17 to 1 ratio, ten speeds forward, and one reverse, as mistakenly stated in Motor West of July 1.

Lem Loosehead says: My frien' Roy Compton sez if figgers don't lie, liars can figger; 'n' thet's no lie.

New Hartford Idea Brings Him Back.

The bringing out by Edward V. Hartford, Inc., New York City, of the new Hartford shock absorber, is the reason for the return to California of Henry Lansdale, well known automobile sales executive. Mr. Lansdale now is California distributor of the Hartford line, being located at 1305 South Figueroa St., Los Angeles. Back in 1906 he began as an automobile salesman, and since then has been assistant sales manager for Cadillac in Detroit, sales manager for Packard, Detroit, and vice president of Locomobile at Bridgeport, Conn. Years ago (he does not say how many) he was a Mitchell car salesman for Greer-Robbins Co., Los Angeles.

Ancient and honorable as his record is, it is antedated by that of Hartford shock absorbers, which were born in 1904. The old-time race drivers used them and gave them strong praise, and recent Hartford records on better than 100 miles an hour cars are in a way but history repeating itself. Recent events on the Los Angeles Speedway and other California tracks saw practically all the cars riding on Hartfords. At Indianapolis this year 29 cars, the entire entry list, had them. A Hartford-equipped Paige Daytona sport model, driven last May on the Cotati Speedway for a new record by Earl Cooper, was Hartford-equipped. They smoothed the way for Sig Haugdahl in covering one mile in 19.97 seconds at Daytona Beach recently.

The new Hartfords, per set of four, sell at between $37.50 and $40.50 on the Coast, and carload shipments to the Lansdale headquarters are now necessary to fill all orders.

To Read Papers at Olympia.

Service experts representing manufacturer of the things repairmen, especially, use, from all parts of the country will attend the gathering of Washington Automotive Trade Association, to be held in Olympia, July 21-22. Papers will be read by some of them on the first day of the convention, at the repairmen's craft meeting. Other crafts to convene on the same day include car dealers, battery dealers, tire dealers, service station men, accessory men, body and top men, painters and grinders.

Pioneer Manufacturer Dies.

Frank L. Mitchell, 70 years of age, died in Santa Barbara, Calif., July 4. He organized and was the first president of the company which now is well known as Mitchell Motors, Inc., Racine, Wis. In the old days Mr. Mitchell was a wagon manufacturer.

ROCKY ROAD FOR MOTOR CAR THIEF

San Francisco Trade Men's Plan Makes Illicit Storing Difficult — Bay City Business Quite Satisfactory.

One more difficulty has been thrown in the rocky road of automobile thievery by an agreement entered into by representatives of the Motor Car Dealers' Association of San Francisco and the Garage Owners' Protective Association of San Francisco, at a recent meeting. Henceforth, it is stipulated, the garagemen will supply, twice a month, reports on every car stored in their establishments for 15 days previous to the date of the report. Outside of San Francisco, dealers and garagemen in several Northern California cities and towns have promised to give similar information to the San Francisco dealers' body and the police authorities.

This co-operation has been hastened and strengthened by many months' work on the part of W. F. Culberson, president of the dealers' body, and Elliott M. Epsteen, its attorney, to make it more hazardous a matter to store, and hence virtually conceal, stolen cars in public garages.

Business conditions, San Francisco distributors say, are steady and satisfactory, that is, while they believe the 1922 sales have reached the top, summer sales certainly have so far given no reason for complaint, or forebodings that the general upward curve will show more than a slight depression in July and August. The factories continue to place a notable number of new models in San Francisco, and they are being steadily absorbed, both by an active retail buying demand, and orders from out-of-town dealers.

The Kissel sedan; Haynes coupelet, Cole ultra sportster; Jordan Playboy, Studebaker Big Six 4 passenger speedster; new Reo models; Stanley 740 models; and the complete new Continental-equipped Roamer car line, are especially prominent among the newcomers.

Don Lee, California distributor for Cadillac cars, sold 1270 of the new model 61 cars during the first six months of the present year. Sales were almost equally divided between the northern and southern sections of the state, Northern California leading by a slight margin. January sales were 242, February 182, March 236, April 219, May 179, and June 212. The last named month showed sales 200 per cent greater than in June, 1921. Some idea of Lee activities is given by the fact that Don Lee, Inc., was incorporated recently in San Francisco for a capitalization of $1,500,000 by Don Lee, Annabel T. Lee and W. J. Gleason.

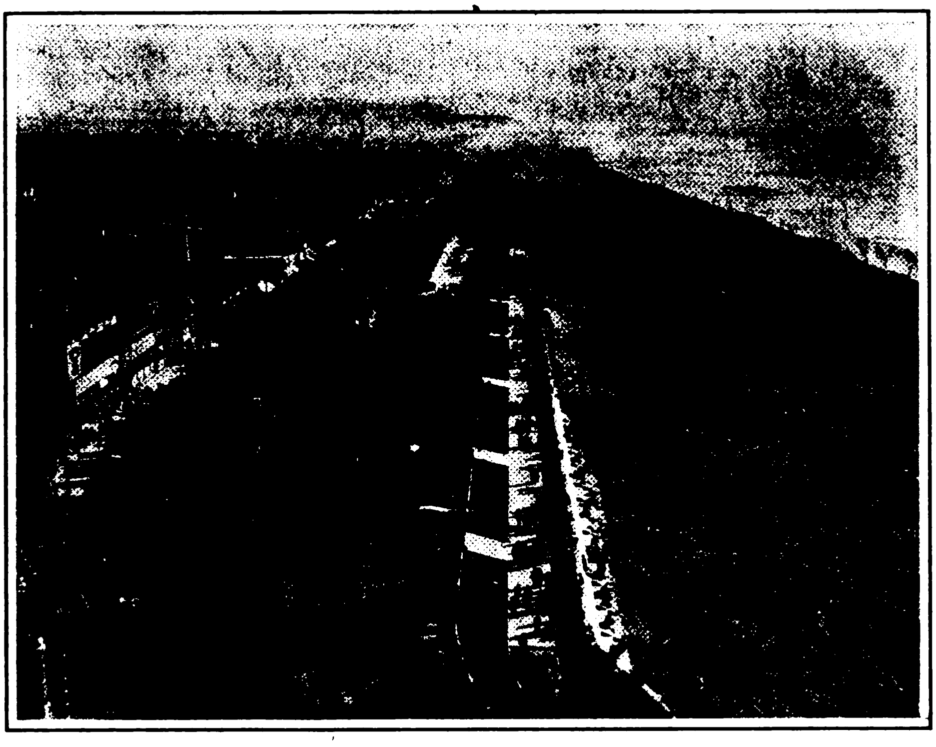
Representing practically the other end of the automobile price range is the announcement by Anderson-Smith Motor Co. that it sold 52 new Chevrolet cars in the first five days of July in San Francisco and San Mateo Counties. Sixteen cars were sold July 3, and 10 on the following holiday.

An important appointment is that of A. R. Dawson, who becomes sales manager of Cole Motors, Inc., distributor of Cole cars. Mr. Dawson in years gone by was manager of the old Lozier branch in San Francisco, later branch sales manager there also for Don Lee, and more recently Templar factory representative, with Los Angeles headquarters.

A Cleveland Greyhound model, sent out by Chandler-Cleveland Motor Car Co., San Francisco, and driven by Hart Brandon, recently completed a 3000 mile, 9 day run through Northern California, over valley boulevards and Sierra roads. It is now in course of a 1000 mile trip through the central and southern parts of the state. The idea is to prove, and later proclaim, the car's endurance under the same kind of treatment as the average, not too skillful tourist would give it, and under all sorts of road conditions. However, a tremendous mileage was piled up quickly, and one day 505 miles were covered between Woodland and Fresno, despite two punctures and several other hot weather incidents.

The Pacific Coast, and San Francisco especially, is more than ever the summer visiting habitat of numerous men important and widely known in the automotive industry, although with many of them the vacationing tendency is so strong that their presence hardly is known to the local trade.

Gordon Lee, chief of the automotive division of the Department of Commerce, addressed members of the Motor Car Dealers' Association, the San Francisco Automobile Trade Association, and several hundred business men at a luncheon at Palace Hotel. Also present in the city for several days recently have been J. H. McDuffie, vice president Cole Motor Car Co., Indianapolis; O. L. Weaver, general manager of Star Rubber Co., Akron; D. E. Wood, Automobile Blue Book Co., Chicago; E. N. Culver, assistant sales manager of Willys-Overland Co., Inc., Toledo, O.; A. M. Montgomery, Dodge Brothers, Detroit; and Harry G. Moock, assistant sales manager of Hudson Motor Car Co., Detroit.



OCEAN BEACH ESPLANADE, SAN FRANCISCO, LOOKING SOUTH FROM CLIFF HOUSE.
San Francisco is proud of its Great Highway. This view, from Cliff House, shows a portion of it, Ocean Beach Esplanade. Note the parking area. There is space for three rows of motor cars. From all parts of Great Highway a fine view of the Pacific Ocean is obtained. It is the Bay City's chief and most available scenic boulevard, though only one of a number which have been developed in spite of the comparatively limited area of the city and peninsula.

A statewide courtesy-schooling for city and village police is on in Minnesota. Reason, tourist traffic. Most Coast police are reasonably polite.

Pacific region landscapes—can you beat 'em anywhere, these days; or any days, for that matter?

SOUTHLAND SALES BREAKING RECORD

Both June and Half-Year Show Striking Gains Over 1921, with No Indication of a Let-Up Ahead.

June was one of the best selling months in Southern California's motor vehicle history. In the territory dominated by Los Angeles distributors, 7436 passenger cars and trucks were sold, compared to 5223 in June, 1921, a gain of 42.3 per cent.

Motor truck sales in June were 882, or better by 77 per cent than in June last year.

Los Angeles County accounted for about 70 per cent of the total sales, or 5200, and Los Angeles city absorbed 3385, or 45.5 per cent.

However, the month was but the culmination of half a year's excellent business. Total registrations in the 11 southern counties of the state were 36,205 in the first six months of 1922, showing a 51.1 per cent increase over the 23,954 total attained by the first half of 1921. Los Angeles County took 71.1 per cent of these sales, or 25,774, and Los Angeles city, 45.8 per cent, or 16,582. Motor truck sales in the southern counties showed an increase almost as notable, there being 4244 sold in the first half of the present year against 2846 in the same period of 1921, a 49.1 per cent increase.

By counties, the six months' sales were as follows: Los Angeles, 25,755; Kern, 2108; San Diego, 2004; Orange, 1931; San Bernardino, 1219; Santa Barbara, 886; Riverside, 822; Imperial, 669; Ventura, 556; San Luis Obispo, 411; and Inyo, 76.

In Los Angeles it may truly be said that the generally expected summertime slump has not arrived. Distributors are not over-optimistic, however, and they look for no new records to be broken before autumn, although sales are holding up remarkably well.

Willys-Overland Pacific Co. states that for several weeks it has been lacking in all models for immediate delivery, and even display cars and "demonstrators" are at the irreducible minimum. This is due both to heavy local demand and curtailed shipments from the factory, which must now give a large share of its attention to the awakening Eastern demand. However, according to Manager Lester P. Fitts, a shipment of 20 carloads of Willys-Knight and Overland cars is now nearing California, and another one of 18 carloads left Toledo a few days later.

Smith Brothers, Peerless distributors, sold 20 Peerless cars in the third week of June, of these, 16 were enclosed types. Deliveries of enclosed cars, in fact, form between 75 and 80 per cent of the agency's present business.

Leon T. Shettler, Rickenbacker distributor, also finds enclosed cars in strong favor in the season when they are supposed to be least necessary. Approximately 34 per cent of Rickenbacker sales in Southern California are in coupe and sedan types. Chase Garfield, sales manager, says the agency sold 12 cars in April, its first month of business, 31 in May, 60 in June and had 38 unfilled orders booked when he left for the factory to persuade officials there to let Southern California have 75 cars for July demand. Fifteen out-of-town dealers have been appointed throughout the territory.

Paige Co .of Southern California sold more than 100 cars during June in Southern California, states J. M. Sterling, manager.

TRAIN FOR SOMETHING

There is a type of student who, having completed a semester or a year of college study, feels himself educated and seizes the first opportunity. And for some purposes he is educated. . .if he is merely looking for a job to adopt him for life; for a rut that he can't fall out of. But if his aim is higher. . .if he realizes the business world today is competitive as never before and expects its workers to come to it trained. . .then he will remain in college. There are exceptions. Men with less than college education have climbed high. But their proportion grows smaller. . .they would have accomplished much more had they in their younger days received thorough training. The world today expects the college man not merely to be educated, but to be educated for something.—Commerce Journal of University of Southern California.

New models received in Los Angeles are the Auburn sedan; Mitchell F-50 models; Reo 7 passenger touring; Winton 40 models; Jewett touring car and sedan; Rickenbacker 4 passenger coupe; Overland delivery car; and Chevrolet Utility coupe.

Mitchell cars have returned to active representation in the territory with the opening of Mitchell Motors Co., a factory branch, in temporary quarters at Figueroa and 7th Sts.

A. B. Plomteaux, 1400 South Figueroa St., has been appointed Los Angeles sales agent for Stutz cars, and service will be supplied to Southern California owners by M. L. Pence at the same location.

The same Maxwell which participated in the recent Los Angeles-to-Camp Curry economy run was used to show the stamina of the line turned out by the Detroit factory on the famous Quintero St. hill, recently. Driven by C. A. Doyle, sales manager of Union Motors, Inc., distributor, it climbed this incline with 20 passengers clustered in and around it, then descended and climbed it again with 25 passengers, before a considerable and much interested crowd. Quintero St., east of Sunset Boulevard, has a grade of 24.04 per cent, according to city engineers' figures.

Watsonville to Have Show.

Between pretty Santa Cruz and historic Monterey, California, is Watsonville, a hustling little city. In its civic auditorium, August 12-16, will be held the first annual motor car and accessory show of the Watsonville Motor Car Dealers' Association. The building is a beautiful redwood structure, and the available space set aside for cars was 50 per cent over-subscribed for before June ended. Accessory spaces, 10x10, at $50, with no charge for gas, water or electricity, still are to be had. Aside from the public interest, the show is expected to put exhibitors in touch with dealers of Santa Cruz, Monterey, San Benito and Santa Clara Counties.

Phoenix Cars One to 4.5 Persons.

There are now in Phoenix, Ariz., more than 7200 registered automobiles and trucks, said to represent a ratio of one car to every 4.5 persons in a city of 30,000 population.

M. P. Barret Co., Studebaker distributor, with branches at Mesa, Tempe and Chandler, sold 61 new cars in June. Phoenicians alone bought 37, surpassing the close competition of Tucson, where Arthur W. Olcott Co., Studebaker dealer, sold 34 during the month.

McArthur Brothers, Dodge Brothers distributors, made delivery of their 6000th car, a roadster bought by a Phoenix citizen.

Auburn Outwears Three Speedometers.

In San Pedro, Calif., Los Angeles' harbor city, is an Auburn car which has been driven practically every day, the past 12 years. Its owner, George E. Werner, claims that in all that time he has only once found it necessary to call for help. The car still is in daily use; in all its life it has had almost no repairs and has practically never been out of service. In a letter to the factory, at Auburn, Ind., Mr. Werner says this grand-daddy Auburn still has all the original units, and that it already has piled up a record mileage on its third speedometer.

Motor West

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JULY 15, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

Cases of Coast Initiative

WHEN a thing is a good thing, pull it or push it along. Don't do nothing with it. The sign, "Another Nash," means another Nash sold. That's making each sale help make another sale. Quite by accident, in heads above articles about worthy industries conceived and increasing in prosperity in its region, these words were used by Motor West in two different instances: "Another Case of Coast Initiative." Don't be surprised if it happens again. If it does it will be "on purpose." A region, like anything else, is helped best when it helps itself.

Remarks on Weight Reduction

WHEN a country experiences difficulties, such as hard times, folks are less likely to find the reason in economic cycles than in the political administration, and are likely to elect a new administration as a remedy.

Just now, the streets in certain cities throughout the country, including Pacific Coast cities, are going to pot in a hurry, due partly to their surfaces having been dug through to put or repair pipes, etc., below—grand practice, that; partly to happy-go-lucky upkeep principles; and partly to tremendous traffic. The paving material and contracting men are rubbing their hands in gleeful expectancy of rich pickings soon.

All that, merely as idle opening remarks. For reasons practically like those just mentioned, Oregon and California soon are to be astonished by being told approximately what it will cost to put their state highways systems in first class condition again. There is no glaring evidence of wreckage, but the little here and the little there will make a whale of a total; and in California a reason in addition to those stated, for such a condition, will be the brittle, inelastic cement concrete, which, no matter what the sub-base, has not the "bridging" endurance of the far more elastic asphaltic concrete which is favored in Oregon, where also, sub-bases are said to be better. In that state, however, the bill will be big enough.

There will be a howl. The fact probably will be disregarded that these highways, in spite of lack of upkeep thoroughness such as would have been used in, say, England, have paid splendidly on the investment—50 per cent per annum in California, it is claimed; also the fact that much cement concrete construction has been too thin in the same state. Equally thin or thinner asphaltic has stood traffic much better.

Then there will be eager search for a "goat" to milk, to raise the needed money. Already, with about as much perspicacity as was indicated in the first paragraph, people are swallowing propaganda favoring increased taxation of motor vehicles and reduction of maximum permissible gross weights of those that are trucks. No calculations have been offered. Apparently the state highway commission's suggested gasoline tax rate was suggested merely by a desire to tax as much as could be dared, in the hope of getting all possible, and not enough at that. The commission has not ventured, so far, to say what it believes the increase in motor truck and stage taxation should be. The big and sole idea is to get the funds, from the most available sources.

So with respect to the proposed weight reduction—the idea is to save the roads, with nothing said as to calculations having been made, resulting in the 22,000-pound decision, and nothing or little said about about any intention to build roads better fitted to increasingly busy and profitable traffic. No thought, it seems, about other facts which should be considered, such as the following, presented in a Long Beach newspaper:

An apartment in construction there is to cost $360,000, of which the cost of fixtures will be about $20,000 according to present conditions, including the maximum truck weight limit of 24,000 pounds. Of the cost of the fixtures, 3 per cent, or $600, is truck haulage. Reducing the truck weight limit to 22,000 pounds would increase the haulage cost 18 per cent, adding that much to the cost of the fixtures alone. Multiply this instance by many, in various cities, and consider similar increases in costs in a large number of other enterprises throughout the state, especially such as require heavy and expensive materials—cement concrete highways, for instance, and buildings—and it is easy to visualize a very considerable sum. More than 55 per cent of the cost of sand and gravel is transportation cost.

Increased motor vehicle taxation may be deemed necessary, in line with a general theory of taxation by which those who produce prosperity are taxed the most, though general taxation would mean much wider distribution of burden and hinder general progress less; and by means of the propaganda now getting into full swing, motor truck weight limit may be reduced, though many believe it would be a very unwise move. It is interesting, the way in which those behind both moves are going about the job, and how little definite information they seem called upon to give.

Read All You Can About It

THAT the Federal Reserve system, psychologically and by its actual money power, has done much to prevent commercial panics, is a fact. That the plan has serious faults nevertheless, is pointed out and is of deep automotive and general interest.

Ultimate net earnings, it is provided, shall be placed in the United States Treasury. To a recent date this net was $184,537,336, compared with about $123,000,000 net profit to the Federal Reserve Bank itself in the same 5 year period; but it is to be noted that before the United States receives a cent, there is paid a cumulative 6 per cent on capital stock, deposit is made toward a surplus equal to the capitalization, and all expenses, on which there is no limit, are paid. The expenses include the marble headquarters palace in New York, and salaries said to be very much larger than the recipients received from former employers. In a very actual sense, much of the expense is profit.

That there is no more gain to member banks than in ordinary banking is stated. That headquarters profits are tremendous, and of course growing every year—$59,000,000 in 1921—is shown. That the system is cumbersome, complicated, unnecessarily costly, is charged. That it was very unfair to automotive and agricultural progress, not so long ago, is remembered. Agriculture still is hampered seriously. It also is notable that, even when stringency was tightest, money was obtainable for such enterprises as a chain of about 300 theaters. Odd, that money was procurable for parasitic enterprises when it was very hard to get for productive industries.

It is well not to be too easily satisfied. Let us remember that the Federal Reserve, like the banks which run the finances of England, France and Germany, is a private affair; that its investors are out for the money; that they hope for and expect even more power over the people's finances than has been given them.

Let us read up on this subject at every opportunity. There is a best plan for everything. Thought will develop it, the opposite develops slavery. "Knowledge is power."

Over the Hudson—Why Not the Bay?

THAT will be a wonderful bridge across the Hudson, connecting New York City with the mainland. Its upper roadway, 2½ times as wide as Fifth Avenue, will accommodate 16 streams of vehicles. The upper deck also will have space for four car lines and two sidewalks. On the lower deck will be 12 railroad tracks. The bridge will cost $130,000,000, but is expected to pay for itself by cutting the cost of transporting goods across the Hudson from $2.28 to 50 cents a ton. It is said the long delay in having it built has been due largely to those who have benefited selfishly by the difference indicated.

Some day—when the well known beneficial results of regional or district co-operation, and the obvious loss to all concerned by lack of it, are appreciated—there will be a big bridge across San Francisco Bay. It will speed up transportation, and the prosperity that that means, prodigiously. Pinky-dinky sectionalism is holding it back. Maybe a bit of incorporated narrowness could be discovered in this case, too.

There is interesting matter on the Car of Commerce page about the $65,000,000 California highway howdedo.

Ford Wins, Many to Benefit

By decision of United States court of appeals at Cincinnati, Ford Motor Co. won one of the most important patent suits tried in this country for years. According to O. F. Barthel, of Barthel, Flanders and Barthel, counsel for Ford, the action of Thompson Spot Welder Co., of Boston, against Ford, to sustain the Harmatta patent for a process of spot-welding, has been held void. The case was dragged through years in various courts, and the decision will save numerous factories some millions of dollars in royalties, which they might have been forced to pay had the patent and the contentions of the Thompson Co. been sustained.

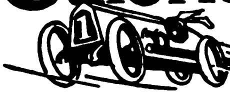
Apperson-Supreme-Colonial Rumor

It is reported that negotiations for consolidation of the Apperson Brothers Automobile Company, of Kokomo, Ind., with the Supreme Motors Corp. and Colonial Motors Co., both of Warren, O., have been in progress some time. Official confirmation is lacking, however. Supreme Motors, which is headed by A. W. Green, manufactures the Supreme Eagle Seal engine for cars, trucks and tractors. Colonial Motors was formed by Otis Friend, who proposes to build an assembled car.

Ward La France Corp. Is Sold

Ward La France Truck Corp., Elmira, N. Y., has been sold by the receivers to Walker Motors, Inc., of New York City, subject to court confirmation. R. W. Walker, head of the New York company, formerly was sales manager of Hurlburt Motor Truck Co., and later was identified with the receivership of the latter.

Calendar of Coming Events



July 15—Grand Prix Road Race in Alsace-Lorraine, Auspices Automobile Club of France.

July 19-20—National Motorists' Association Convention, Chicago.

July 21-22—Washington Automotive Trades Assn. Meeting, Olympia.

Aug. 6.—150 Mile Race on Cotati, Calif., Speedway.

Aug. 12-16—First Annual Automobile and Accessory Show at Watsonville, Calif., by Watsonville Motor Car Dealers' Assn.

September—Automobile Exhibit, Rio de Janeiro, Brazil, in connection with Brazilian Centenary.

Sept. 4.—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

Sept. 4-9.—Spokane's Annual Automobile Show, in connection with Spokane Interstate Fair. B. J. Garnet, Manager.

Sept. 9-16—Automobile and County Industrial Show, Modesto, Calif., under auspices of Stanislaus County Auto Tradesmen's Assn.

Sept. 13-15—Sixth Annual Fall Convention, Motor and Accessory Manufacturers' Assn. Place to Be Selected.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

October (may be November)—Tent Show by Motor Car Dealers' Assn. of Los Angeles.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Oct. 28—150 Mile Race, Fresno, Calif.

Nov. 8-12 (tentative)—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 11—50 and 100 Mile Races, Cotati, Calif.

Nov. 13-28—Automotive Equipment Assn. Annual Show, Chicago.

Nov. 30 (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

December—Annual Automobile Salon, Hotel Commodore, New York, During N.A.C.C. Show.

January—Annual Automobile Salon, Chicago, During N.A.C.C. Show.

Highway Matters

Seven Percent System, et Cetera

THE basic Federal road aid formula is that a state's proportion of the national sum designated for any year shall be the same as its proportion of population, area and highway mileage, combined, is to the national total of those factors, combined; and that it shall match Federal aid, 50-50. Speaking now of commercial or "post" roads; for forest roads the arrangement is variable.

As to commercial roads, in view of the fact that in Western states self-development, hence ability to stand the 50-50 burden, is hindered by huge areas being held by the Government (90 per cent of Nevada is so held), a proviso is that Federal road aid to those states shall be 50 per cent of the construction cost, plus a percentage equaling that of the Federally held area in the state to the state's total area.

Federal aid is limited to 7 per cent of a state's total highway mileage, and the state must list the roads it wants to have placed in what is called its 7 per cent system. Within this system, those roads which are interstate, that is, connect with the 7 per cent roads in adjoining states, are called primary, the others secondary, are intercounty. Of the Federal aid, three parts go to primary roads and the remaining four parts to secondary roads.

There is woeful lack of co-ordination between the primary roads in different states—too often they do not connect with those of adjoining states. This of course will be rectified in time, thereby hastening the creation of a system of national scope. The present situation is another proof of the desirability of a plan which was stated with extreme clearness in a bill introduced in Congress a couple of years ago by Representative John E. Baker, of California, and drawn by Wisner Gillette Scott of California. The plan was for a progressively eliminative series of county, state and regional highway planning conferences, the state and regional meetings to be attended by state highway department and national highway experts. By means of these meetings, culminating in the regional conferences, all local, state and regional highway needs and demands would be co-ordinated and sent to national headquarters, with everything practically complete, the result of intensive, time saving, prosperity-hastening work by thousands of able minds; maps, specifications, cost estimates, and so on.

The regional conference idea is applicable in many ways, not merely to highway matters; and it is taking hold. You see the words "regional conference" in print frequently these days. The country is too large to be "seen" or managed accurately, equitably or profitably from any one point; and when a man becomes a member of Congress he loses a clear view of the region which sends him; he is enveloped in the Washington atmosphere, and subjected to influences which are not regional but represent classes, and industrial, financial and other special interests. This will change—in time.

Lacking the regional conference method and its speed and completeness, nevertheless the idea of interstate trunk roads forming a system of national scope is progressing. All but eight have submitted their proposed primary systems to the Bureau of Public Roads. These are plotted on a large map of the United States, in Washington, and examined carefully as to interstate connections; and conferences do occur, between Federal representatives and state highway officials, where connections are unsatisfactory; also, some states have adjusted matters with their neighbors directly. Nebraska, for instance, showed a big gap in an important road along its northern boundary. It was learned, however, that South Dakota would have a route just north of the line, and that would fit into Nebraska's system "like pictures on toy blocks," it is stated from Washington.

Since the latest phase of the Federal aid act took effect, last November, only roads certain to be on the 7 per cent system have been approved for construction; meaning, presumably, only the primary, interstate roads, and that others must wait.

Coast Has a Highway Bill Ahead

As stated in an article on proposed increased taxation of motor trucks in California, in this issue, a request for information by the state body of county supervisors brought from California Highway Commission a reply that it expects to need $65,000,000 in the next 5 years for reconstruction and repairs. Of this, $33,000,000 is for widening and thickening existing roads. Somehow, possibly aided by an automobile club management that is unfriendly to the commission, the news got into newspaper hands and the Los Angeles Times of July 9 raised a terrible howl about "incompetence," in a news article, and the next day followed with a long editorial.

Others than the commission did not foresee the traffic ahead, when the present highway program was begun. Whatever incompetence there has been is as nothing compared with what the traffic has been. The roads are said to have paid at least 50 per cent per annum profit to the public. On the two main routes up and down the state, no ordinary observer would say that anything terrible has happened to them.

California will get used to large highway cost figures bye and bye. It has a tremendous mileage, built and to be built. About 3000 miles are yet to be constructed, to complete the 5000 miles which will include the special-act roads; and it has been estimated that, including the proposed $65,000,000, as much as $180,000,000 in addition to all that has been voted will be required to complete the system. The estimate is based on roads 4 inches thick, 18 feet wide. Thicker roads, 20 feet wide, will cost more, of course; and that thicker and wider roads will be needed goes without saying.

California is not alone in being about to face an array of startling estimates of reconstruction cost. Oregon, though it is said to have given more intelligent attention to sub-base than other states on the Coast, also is said to be due for a shock before long.

Federal Road Head to Visit Coast

An item in Motor West of June 15 was headed, "To Lambast Public Roads Bureau." It referred to a meeting of the Western States Highway Association, representing the highway departments of 11 Western states, to be held in Portland, June 20. To Portland newspapermen nothing indicative of lambasting anybody in the meeting was revealed, but Thomas H. MacDonald, chief of the Bureau of Public Roads, Washington, D. C., a very busy man, formerly state highway engineer of Iowa and who never has been west of the Rockies, received something like evidence of dissatisfaction from the Portland meeting, judging by the fact that he has invited all of the state highway department heads of the 11 Western states to meet him in San Francisco, July 23-25.

Warren G. Harding is the first President who has used the motor car on long journeys. Recently he was taken by automobile from Washington to Marion, O., his home town, and return; not all the way on good roads, at that.

Durant Motors has increased its capital stock from 1,000,000 to 2,000,000 shares of no par value.

Idle freight cars decrease. On June 23 there were 439,074, compared with 442,252 on June 15.

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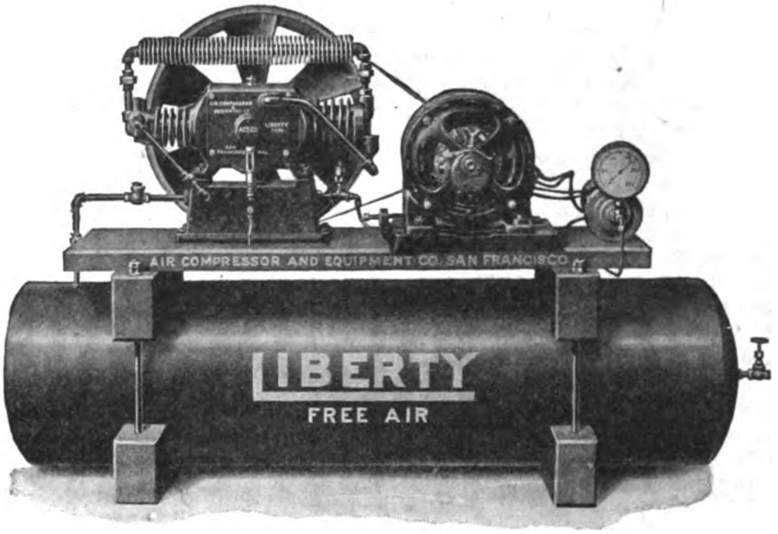

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Facts About a Huge Merger

Associated Motor Industries to Have Full Line, Distribute Widely and Finance Dealers

ASSOCIATED MOTOR INDUSTRIES, $80,000,000 corporation, the merger which has just been perfected by makers of seven different cars and trucks, and the progress of which has been noted in Motor West, has organized its central offices at Dayton, Ohio, and is pushing work rapidly ahead to get into full production. Nine manufacturing plants in seven states, with five assembling plants, making fourteen plants in all, are included in its first group. Additional companies soon are to be taken into the merger, it is announced. The following details are from the education department:

Will I. Ohmer, of Dayton, O., whose plant is one of the largest making ignition systems, is chairman of the board. In announcing that Mr. Ohmer will direct all operations of Associated Motor Industries, the board of directors states that he is recognized as one of the foremost production experts of this country.

Associated Motor Industries will continue to produce the cars and trucks at present made by the member companies, including Jackson automobiles and Jackson four wheel drive trucks, the Dixie Flyer car, the Old Hickory truck, Traffic trucks, and the cars and trucks now made by National Motor Car and Vehicle Corp. The line thus includes a four, a light six, a de luxe six and a full line of trucks for all purposes.

In addition there will be a large surplus of parts and equipment that will be sold to outside manufacturers at prices sufficiently attractive to insure the disposal of the entire output, thus maintaining full speed production by all plants at all times.

Standardized, large quantity production will be put into effect. All the plants are fully equipped and capable of indefinite expansion in output. The dealers' financing plan of Associated Motor Industries is an innovation on the distributing end, relieving the dealer of the burden of financing himself and providing an unprecedentedly liberal sales outlet for the corporation.

Following are the manufacturers included in the first group of Associated Motor Industries. Other manufacturers soon are to be taken in and their names are expected to be announced within a short time:

National Motor Car & Vehicle Corp., Indianapolis, manufacturing National cars and trucks.

Covert Gear Co., Lockport, N. Y., manufacturing all types of transmissions, clutches and controls for cars and trucks.

Recording and Computing Machines Co., Dayton, O., manufacturing ignition systems, magnetos, starters, battery systems and generators. Scientific research plant.

Jackson Motors Corp., Jackson, Mich., manufacturing Jackson cars and four wheel drive trucks.

Kentucky Wagon Mfg. Co., Louisville, manufacturing the Dixie Flyer car, the Old Hickory truck, automobile wheels, truck bodies and the Studebaker, Old Hickory and Tennessee wagons.

Saginaw Sheet Metal Works, Saginaw, Mich., manufacturing all sheet metal parts for automobiles and trucks.

Traffic Motor Truck Corp., St. Louis, manufacturing Traffic trucks.

Murray-Tregurtha Corp., Boston, manufacturing gasoline engines.

H. F. Holbrook Co., New York, manufacturing automobile bodies.

The officers of the corporation are:

Chairman of the board, Will I. Ohmer; president, Louis Ruthenburg; vice presidents, A. A. Gloetzner, Robert V. Board, T. C. Brandle, George M. Dickson.

The board of directors is composed as follows: Chairman, Will I. Ohmer, president Recording and Computing Machines Co.; Robert V. Board, president Kentucky Wagon Mfg. Co.; A. A. Gloetzner, president Covert Gear Co.; James R. Duffin, president Inter-Southern Life Insurance Co., Louisville; Louis Ruthenberg, formerly general manager of Delco plant of General Motors Corp.; H. G. Stoddard, treasurer Wyman-Gordon Co., Worcester, Mass.; H. V. Hale, general manager Saginaw Sheet Metal Works; H. J. Linkert, treasurer Recording and Computing Machines Co.; C. L. Halladay, vice president and general manager Jackson Motors Corp.; W. W. Sterling, vice president Jackson Motors Corp.; C. L. V. Exselsen, vice president-treasurer Roland A. Crandall & Co., bankers, Chicago; Guy Wilson, president Traffic Motor Truck Corp.; T. C. Brandle, vice president in charge of merchandising, Traffic Motor Truck Corp.; G. M. Dickson, president National Motor Car and Vehicle Corp.; Buell Hollister, of Pyne, Kendall & Hollister, bankers, New York; H. F. Holbrook, president H. F. Holbrook, Inc.; M. Douglas Flattery, chairman of board of Murray-Tregurtha Corp.

Finance and advisory committee: Will I. Ohmer, Louis Ruthenburg, James R. Duffin, Carl L. V. Exselsen, R. C. Morse.

Executive Committee: A. A. Gloetzner, Louis Ruthenburg, Robert V. Board, H. V. Hale, T. C. Brandle, G. M. Dickson, F. J. Linkert, C. L. Halladay, Will I. Ohmer.

The statement issued by the board of directors in announcing Mr. Ohmer as chairman in full charge of operations reads as follows:

"Mr. Will I. Ohmer is well known throughout the automobile field as a manufacturer whose product represents the most advanced methods known to industry. In placing Mr. Ohmer at the head of Associated Motor Industries we avail ourselves of the skill and wisdom of a manufacturer who has made a success of everything he has undertaken, and whose great experience in conducting the largest manufacturing operations will insure the success of our undertakings. Mr. Ohmer's presence at the head of the consolidation gives assurance to the trade and to the public of the highest and most efficient operation of all the Associated Motor Industries plants."

In the organization of the corporation complete title to the plants and all assets of the constituent companies is owned in fee simple by the central corporation. The financing of the merger is most conservative. None of the securities offered are for plant betterment, as all the plants are in first class operating condition now.

The assembling units are at Boston, Mass., Oakland, Calif., Indianapolis, Ind., St. Louis, Mo., and Louisville, Ky., thus establishing a sweep of finishing plants in a big curve that covers the country from coast to coast. By bulk shipments of parts and deliveries from the assembling plants, it is figured that cars can be put down practically freight free by Associated Motor Industries anywhere east of the Rocky Mountains.

Dealers' financing plan: One of the most important innovations introduced in the automobile field by Associated Motor Industries is a $35,000,000 fund set aside for financing its dealers. This fund will be increased in following years, if necessary. In fact the bankers' syndicate interested in the plan has let it be known that they will authorize the use of up to $100,000,000 for this purpose at any time it is called for under the specified conditions.

By the dealers' financing plan 90 per cent of the dealers' liquid working capital will be provided. Roland A. Crandall & Co., investment bankers, of Chicago, have worked out the details as a result of many years' experience in financing sales. The plan makes the dealer an integral part of the corporation, carries his financial burden for him and furnishes the most effective aid to his sales efforts.

All operations of Associated Motor Industries will be directed by Mr. Ohmer from the central offices in Dayton. The plants in the different states are being equipped with radio for instantaneous communication at all times with the main office. No other business organization has ever made such an extensive use of radio.

Louis Ruthenburg, president, in general charge of production, resigned from General Motors to join Associated Motor Industries. He was manager of the Delco plant of General Motors, and manager also of the manufacturing division of General Motors Research Corp. Mr. Ruthenburg was born in Louisville, Ky., in 1888. He studied mechanical engineering at Purdue University in the class of 1909, and has devoted his entire career to the automobile industry, first with the E. C. Walker Co. of Louisville, manufacturer of automobile parts, then with the electric vehicle division of Kentucky Wagon Mfg. Co., and for the past ten years with Delco. Mr. Ruthenburg is an expert in plant and manufacturing co-ordination. He is a close student of economics and business psychology and is in thorough accord with Mr. Ohmer in all his plans.

Mr. Ohmer's policies: Mr. Will I. Ohmer, in taking his place at the head of Associated Motor Industries, will have focused upon him the attention of the automobile world. Mr. Ohmer is already one of the best known among American manufacturers. He is a leader in efficiency methods, a farsighted financier and a humanitarian and philanthropist. His own plant has a capacity employment of more than 8000 workers.

In his opening announcement of policies Mr. Ohmer sounded two notes of the highest importance both to business and to wage workers. First—that prosperity is here now, and second, that a general wage reduction policy by manufacturers is a mistaken one. His principle is that efficient manufacturing methods must make it possible for workers to earn good wages.

Concerning the cars made by Associated Motor Industries, Mr. Ohmer declares that quality will be maintained and the price kept down by standardized quantity production.

In taking charge of the work Mr. Ohmer gave out a statement of which the following were the high points;

"We shall start production at full speed. Prosperity is here now. Associated Motor Industries believes that the country never was in better condition than at the present time to open factories and begin production and putting men and women to work. There is no question about the sale of goods after they are manufactured, at reasonable prices.

"It is the purpose of Associated Motor Industries to standardize and produce in such quantities as will get the cost of cars of quality within reach of the people.

"There is no question but that a reduction in cost so that prices will come within reach of the consumers' pocketbooks must be brought about before there can be a return to 'old time prosperity.' The manufacturer must be satisfied with smaller profits. And to be able to reduce the cost and work on smaller profits it is necessary to increase production by the most efficient methods.

"The merger is the answer of this age to the new requirements of manufacturing. The individual manufacturer is now facing changed conditions."

In his declaration of labor policies Mr. Ohmer aroused the attention of the manufacturing world by his slogan, "Good wages must be paid." Where the Secretary of Labor had created a mild sensation by his assertions in favor of the saving wage over the old standby, "the living wage," Mr. Ohmer came out positively in declaring that wage earners should have not only a living wage and a saving wage, but something more than either, so that the worker could not only live and save but have some surplus to spend and enjoy as he went along.

"What this country wants and what the world wants is harmony, mutual good will, confidence and greater production," said Mr. Ohmer. "The answer to the needs of the country is not wage reduction but more efficient methods of manufacturing. Put the factories on a thoroughly efficient basis and you won't have to cut wages. On the contrary the workers can earn more, and greater production will result."

Mr. Ohmer's announcement brought forth a movement for industrial harmony by a number of the most progressive manufacturers in different lines of industry.

Associated Motor Industries thus starts out on its career under the leadership of a man of unusual breadth of vision in every way. Mr. Ohmer has worked on original lines ever since his entrance into the business world, and has never hesitated to carry out an idea simply because no one else had done it before him. He came forward during the war and executed a twenty million dollar contract that other manufacturers had declined as impossible to perform. By original production methods devised by Mr. Ohmer the gigantic undertaking went through without a hitch at speed beyond all expectation. The story of his humanitarian work for the benefit of wage earners would require an entire magazine article in itself. He is recognized by the leading American manufacturers as one of the foremost experts of the world in large scale efficiency methods. These leaders in the field of industry welcome Mr. Ohmer as the best man in this country available to head such an enterprise as Associated Motor Industries.

Notable Bits of Tire Financing

The recent B. F. Goodrich bond offering is reported to have been oversubscribed in half an hour after opening of the books. It was a $20,000,000 issue, first mortgage, 25-year, 6½ per cent, the funds to be used in the retirement of $30,000,000 5 year 7 per cent convertible gold notes due April 1, 1925, which will be retired entirely, October 1 next.

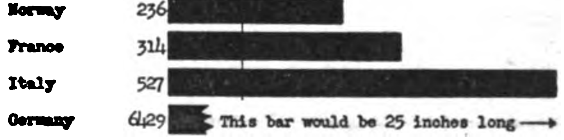
Firestone is offering $1,500,000 7 per cent bonds of its Canadian subsidiary. That plant is to begin operation September 1 on tires and tubes; rubber good to be added later.

Racine Horseshoe Tire Co. is offering $300,000 of 7 per cent bonds.

Touring Around Lake Michigan

The eighth annual Michigan Pikes Association tour is under way. It started from Detroit July 7 and will end there July 20. The route is around Lake Michigan, through Indiana, Illinois, Wisconsin and Michigan, 1738 miles. One of the features is a Mitchell radio car. At night stops and at each of the 77 good roads meetings the Ford Motor Co. band, which has made six of the previous seven tours, supplies music.

Wholesale Price Levels Compared



The above, from the June 15 Business Bulletin, published by Cleveland Trust Co., shows how wholesale price levels in 11 countries in April, 1922, compared with those in the different countries, and in each of them with its own prewar level, in 1913 or 1914, assuming that level to be 100. The showing refers to all business, and indicates the difficulties confronting wouldbe buyers of our automotive products in foreign fields. In addition, in France and Germany particularly, our automotive producers practically are barred at this time. Germany just now is the country to go to, to get the most for a dollar. A young couple recently went there with $1500, on their honeymoon, and found they had, in buying power, a large fortune—$600,000, at the present exchange ratio, a dollar being equivalent to 400 marks. German wholesale prices are about 43 times higher than before the war, but still that young couple's funds suffice for buying several German motor cars and for moderately high living for some time to come. Speaking of purchasing power, James W. Gerard, former United States ambassador to Germany, said recently in London, that an ounce of gold, worth $20.67 in the United States by act of Congress, will buy about 50 hours of average labor in the United States; about 90 hours in Great Britain; about 205 hours in Germany.

"Ask 'em" Plan Refinanced

A. E. A. Gives $65,000 for Merchandising Department's Next Fiscal Year of Dealer-Aid Work

ALL automotive dealers in the United States, particularly those in Far Western states which are deprived of frequent touch with production headquarters, should try to get from the Automotive Equipment Association offices in Chicago printed matter showing the progress of the Ask 'Em to Buy campaign, and the interesting ways in which thousands of dealers, garage and service station men have applied its teachings and prospered.

The outstanding one of the many pleasing results of the association's recent convention at Colorado Springs is the refinancing of that work in charge of the Merchandising Department, directed by Ray Sherman. Each of the association's more than 500 members "chips in" $125 toward the $65,000 needed for that department for the next fiscal year.

It was one of the signs of appreciation of what co-operation has done among the association members themselves. Just between them, the Thirty-One Fair Trade Practices, the Traffic Department, the A. E. A. Handbook, the Universal Catalog, the collection facilities, etc., undoubtedly have been valuable factors in putting the anunual total sales volume of the association's members at $200,000,000! Add to these factors the unlisted ones comprised in frequent social, co-operative personal contact between manufacturers and jobbers; factors the value of which cannot be computated in cold figures but which unquestionably make those figures much larger than they would be otherwise.

"Shop Profits," the new film shown at Colorado Springs, is infinitely better than the first one put out by the Merchandising Department. Its intense interest held the members 30 minutes. As the former film was a good one, the quality of its successor should be appreciated by dealers.

Another wise bit of financing arranged for at Colorado Springs was to make the Traffic Department function continuously, instead of employing Mr. Powe on a part time basis as heretofore. Even as it has been, that department in a number of cases has collected more money and obtained better results than previously had been obtained through outside organizations formed for the purpose.

The department's function will be to audit and collect freight bills, appear before the classification committees in the interest of better classifications of commodities in this industry, etc.

At Colorado Springs, as before, the consummate combination of finesse and steam roller in Commissioner Webster's personality compelled admiration. No member doubts that his personality is the most effective, pervasive, valuable, profitable factor in the association's growing usefulness and prosperity; paying splendid dividends on the investment in it.

What Mr. Webster cannot completely bring about by mail he brings up at a convention and—lo! it is settled. For example, the "aggravated conditions" mentioned in his annual report, due to mutual charges of non-co-operation between some manufacturers and some jobbers, tending, of course, to cause strain between the manufacturing and jobbing sections, the two big units in the association. The way Mr. Webster presented, at Colorado Springs, the need of genuine co-operation, won the unanimous concurrence of both sections.

Reo 100 Per Cent Stock Dividend

As it was said a contemplated Reo stock dividend would be deferred till earnings would justify the 10 per cent annual cash dividend on it as well as the old stock, the fact that Reo has declared a 100 per cent stock dividend clearly indicates belief in continued prosperity.

For six fiscal years ending August 31, 1921, net profits totaled $14,779,346, an average per annum that will enable it to add $1,000,000 to surplus annually, after paying 10 per cent cash dividends on outstanding capitalization after 100 per cent stock dividend is paid.

Reo apparently is not pushing production. The output averages 85 cars daily for a 5 day 10 hour week. This year's output should be 15,000 vehicles, about the same as in 1920. Last year's output was 8500.

Midwest Engine Reorganization

The committee appointed to obtain subscriptions totaling $1,000,000 to the refunding bonds of the new Midwest Engine Corp., reported its success late in June. The subscription was mostly by stockholders of the old Midwest Engine Co. The new company will have an authorized capital of $5,000,000 in 7 per cent preferred stock, 125,000 no par shares and $2,000,000 7 per cent 15 year mortgage bonds. To complete transfer of the old company's assets there was to be a judicial sale about July 11. Technicalities may delay releasing the receivers a month or two, but even under receivership the business has done well. A large number of representative concerns, the country over, are completely "sold" on the various sizes of the Midwest engine.

Hudson and Essex Prices Reduced

On July 1, a $50 reduction was made in the prices of the Hudson speedster, 7 passenger phaeton and coach. Essex cabriolet was reduced $100 and the coach $50. Roy D. Chapman, president of Hudson Motor Car Co., says lower cost of production, due to volume of shipments, is the reason.

Even the also-rans are already doing good business.

PICTURE TAKEN AT THE SPRING CONVENTION OF THE AUTOMOTIVE EQUIPMENT ASSOCIATION, HELD JUNE 19-23,

Haynes Honored While Alive

Huge Shaft Dedicated to "Builder of America's First Mechanically Successful Automobile"

THIS time they did not wait till the man to be honored had passed from this life to the fuller, finer life that lies beyond. On July 4, near Kokomo, Ind., on Pumpkinville Pike, an **imposing concourse** of fellow citizens of Elwood Haynes, including many of national prominence, dedicated a huge memorial monument to him as "the inventor, designer and builder of America's first mechanically successful automobile." The sponsors were Indiana Historical Commission and Hoosier State Automobile Association.

ELWOOD HAYNES.

The base is a solid block of New York granite and the shaft a solid piece of red St. Cloud granite. On the shaft, bearing the inscription, is a beautiful tablet of stellite, the new metal invented by Mr. Haynes.

Specially constructed motor trucks carried the sections of the monument to the place where, 28 years ago, the first Haynes automobile, originated in 1893, made its initial journey and where, on the dedicatory day, it was seen again by courtesy of Smithsonian Institution, Washington, D. C., where it is a chief historical exhibit.

Governor McCray of Indiana, Mayor Moon of Kokomo, and others paid eloquent tribute to Mr. Haynes as an inventor and as a pioneer in a splendid industry, in which The Haynes Automobile Co., of Kokomo, now is one of the leaders in quality product. Mr. Haynes himself spoke. Motion and still pictures were taken of the notable event and millions will see them, in this and doubtless in other countries. Thus the affair was an affair of worldwide interest.

John W. Oliver, director of Indiana Historical Commission, commended the movement to honor Mr. Haynes, in a letter to Gilbert U. Radoye, director of advertising of the Haynes Co., saying in part:

"The name of Elwood Haynes will take its place in history with that of Eli Whitney, who gave the world the cotton gin in 1793; with Robert Fulton, the inventor of the steamboat in 1809; with George Stephenson, the inventor of the railroad locomotive in 1814; and with Elias Howe, the inventor of the sewing machine in 1844."

A. A. A. Whacks the "Insurgents"

At its executive board meeting in New York the American Automobile Association struck back at the Ohio and Illinois state associations, which with the Indiana association withdrew recently and formed a new "national" body. Holding that the Ohio organization "is not functioning properly," the A. A. A. board admitted the Cincinnati club to direct membership, thanked the Youngstown club for its loyalty, and announced these would be the nucleus for a new state body. The Illinois state association was expelled for not making good on checks sent to pay dues.

President Diehl appointed a committee to learn how local clubs in the "secessionist" states feel about it all. At the meeting, 12 new clubs were made members—six of Florida, one of Ohio, one of New York, one of Massachusetts, one of Iowa and two of Michigan. Dai H. Lewis, acting executive chairman, predicts the A. A. A. will be stronger in membership, and financially, than ever, at the end of this year.

A committee will work for investigation of the price of gasoline, which M. O. Eldridge, the association's director of roads, said is unreasonably high, in view of the largest reserves in the country's history.

Maibohm Sale Is Confirmed

H. C. Maibohm, president, and T. W. Cushing, cashier of Maibohm Motors Co., Sandusky, O., protested confirmation of the company's sale to the creditors' committee, who had formed the new Arrow Motors Co. Mr. Maibohm was said to be backed by New York brokers who stood ready to refinance the old company.

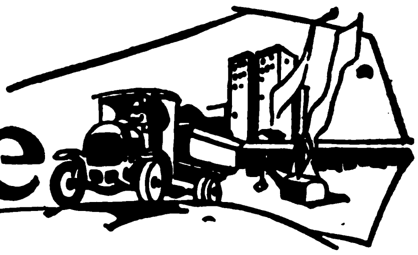
However, news from Toledo, June 29, is of court confirmation of the sale and refusal to set it aside. Sandusky men are helping financing the new Arrow Motors Co., and production is to begin immediately. A. C. Burch, former vice president and sales director of the Clydesdale Motor Truck Co., is president; Vice President O. O. Brace is president of Sandusky Nut Co.; E. B. Ernst, treasurer, was auditor of Maibohm; J. G. Pyle, secretary and general counsel, is an attorney. The board is composed of these and E. G. Kirby, Toledo banker; R. E. Haylett, treasurer of Hydraulic Steel Co., Cleveland; and N. T. Brotherton, president of the Brotherton Co., Detroit.

The plant, built in 1920, all of 1 story buildings, is very modern. An unusually complete body plant is available for coach work and painting.

Mismanagement causes more than 50 per cent of the waste in industry; labor, less than 25 per cent.—American Engineering Council.

AT BROADMOOR, COLORADO SPRINGS COLORADO, IT WAS A HIGH GRADE, SELF-RESPECTING, HAPPY GATHERING.

The Car of Commerce



On Truck and Stage Taxation

WHEN a battle is on, the side with plenty of the sinews of war, and which uses them to best advantage, wins, as a rule. In the contest, not to say war, which is on between railway interests, state highway commissions and boards of county supervisors, on the one side, and operators of individual motor trucks or fleets of them, on the other hand, advantages in propaganda appear to be with the former. That side has more day-to-day opportunities to use the newspapers, and it is using them to the limit. The other side has not the same number or variety of opportunities, and is not using those which are available, as fully as could and should be done. And so the outlook is rather clear, that taxation of motor trucks and stages generally, and in California in particularly, will be increased, and more restrictions imposed than if the side which is on the defensive would make better use of its chances to influence the public mind.

When much money must be raised, legislators are likely to try to get it from what they consider the easiest source among the "interests," instead of by general taxation. That much money must be raised in Oregon and California, soon, for highway repair, is certain. In California, $65,000,000 will be needed in the next five years, according to a reply said to have been made by the state highway commission to the association of county supervisors. That means $12,000,000 a year—and only $7,000,000 a year likely to be available from motor vehicles on the present basis. So the folks who need the money are trying to devise a cider press with more power in its squeeze. Perhaps they will feel encouraged in their effort by the fact—and use the fact in propaganda—that of all money raised for highways and streets, the country over, only 13 per cent is obtained from special taxes upon motor vehicle owners. This is stated by the Bureau of Public Roads.

As to the railways, they claim that in California they are overtaxed. New suits were filed in the United States district court in Sacramento, June 16, by the Southern Pacific and Santa Fe lines, to prevent collection of taxes under the provisions of the King bill passed by the last legislature. The companies contend that a levy of 7 per cent on their gross receipts would exceed the valuation at which their property in the state is taxed. They are willing to pay 5¼ per cent. One suit relates to collection of taxes on gross receipts in 1921. The other suit is for injunction to prevent collection of the 1¾ percentage of the 7 per cent which now is due and has not been paid. The suit presenting general protest cannot be tried until after the tax becomes delinquent, in August, and if the injunction asked in the other suit is granted it will prohibit, it is said, collecting any taxes that become delinquent until all points in the suit of general protest have been settled in court.

The 5¼ per cent the companies are willing to pay was the old rate. The suits tie up $5,000,000 and no doubt will go to the nation's supreme court. That will leave a serious hole in the state's $91,000,000 two-year budget, which means raising additional money from some source, which means motor vehicles, apparently.

Courts are supposed to be guided by the law, but some 30 years ago what were termed courts of equity were evolved because of the sometimes moral inelasticity of the law; and we all know that public opinion affects judges and juries more and more as time goes on, regardless of the letter of the law. We know that, in addition to these suits protesting against taxation under the King law, the railways are sending to the newspapers articles which are being printed, and in which the public's sympathy is being sought toward relieving railways somewhat of tax burdens by increasing taxes levied upon motor vehicles.

Not primarily to help the railways but to somehow, anywhere, raise the money with which to finance maintenance of highways, the state highway commission and boards of county supervisors are on the railway side in the contest. On the whole, they are making an impression on the public mind which it would be foolish for motor truck and stage interests not to recognize.

The question should be, how best to recognize it and in what ways to handle the motor stage and truck side of the situation. Meetings, in themselves, do very little good. They are tempests in teapots. The public does not attend them, and gets very brief reports of them, reports that do not give much information. The fight is not on in this or that meeting room, but in the public mind, which must be reached in millions of rooms, where people sit and read newspapers. That means sending out publicity; and it is important that that publicity be as free of mere quantity, of wind, as possible, and as full of brief, convincing facts, and logic based on facts, as possible. Instead of combatting what may be admitted to be coming certainties, that is, higher taxation and stricter load-limiting regulations, and instead of spinning words with a view to giving in but pleading for leniency, the best thing to do is to appoint a man, or several men, who will have the ability, first, to find out just what the equities in the situation would be, and then the ability to present the facts and arguments to the public, day in and day out, convincingly.

The California Transport Association, whatever its actual merits are as an association, is getting into print a series of articles in which it proclaims its desire to be fair and open-minded, in such a way as to admit that taxes should be higher and load limits lower. California Draymen's Association, the older body, indicates a somewhat similar attitude but apparently does not want taxes as high nor load limits as low as the other body advocates. This situation presents to the public a divided front, assuming that the older organization presents any front at all. It does not do so sufficiently, and it should present a different front altogether. It should, when possible, let the public know what the two organizations are, and why they are, in such a way that the public will understand. It should give that information incidentally, every time it presents the main points.

Mentioning California Transport Association, courteously but in an explanatory manner, in California Draymen's Association publicity, is suggested because it would reduce the impression, in the public and legislative mind, of a divided front.

It behooves those who represent motor stage and truck interests, particularly, to have something very efficient done, in the way of gathering data and getting it before the public, soon. Entirely aside from the attitude and activity of railway interests the statement is being circulated,

Announcing the New

STANDARD "75"

LIGHT DELIVERY
TRUCK
Worm Drive

ONE and
ONE-QUARTER
TON

Compare These Specifications

Continental Motor N-3¾ x 5
Timken Axles {Front 1250
{Rear 6250
Spicer Joints 300 Series
Stromberg Carburetor M-1

Brown-Lipe Clutch Control and Transmission 30 U. P. P.
Eisemann Magneto GS4-IIED.
Steering Gear Ross BU
Tires, Pneu. Cord 33 x 5 F. & R.

At this
Price

$1330.00

(Chassis at Detroit)

Greatest Dealer Opportunity Today!

Price

The price advantage of the new Model "75" is obvious. It needs no spot-light to make it glaringly apparent to the live dealer. A comparison of other Standard Models, unit for unit, proves Standard dollar-for-dollar values.

Value

Price without quality means nothing to a business man. Standard Units are the best the market affords—there are none better.

Complete Line

The new Model "75" finishes the line. Quality-built trucks from 1¼ ton to 7 ton—all worm drive—all of same dependable component parts—tried and proven thru years of service.

You should get the details of the Standard Franchise, now, while your territory may be open.

Standard Motor Truck Co.
DETROIT MICHIGAN

STANDARD

MOTOR TRUCKS

and no doubt will make a big impression on the public mind, that whereas in 1920 California's highway commission's biennial report said the cost of maintenance was $148 a mile, in the short period since that time the cost has increased to exceed $500 a mile. That means, raise more money. While some day such money will be obtained by general taxation, as some time money for street improvements will be, the present logical source of highway maintenance money is, users of the highways; and that means motor vehicle owners; of motor trucks and stages particularly. Their sensible course, to prevent a degree and kind of taxing (horsepower basis), weight restriction, etc., that will injure all concerned, is to undertake the research and publicity work suggested. It will cost real money. Failure to do it may cost much more.

The right kind of publicity—hard facts and figures based on deep research—has not yet been set forth in a systematic, convincing manner. The organization which puts out such publicity will eliminate the divided-front aspect by showing there is one organization which is getting down to brass tacks.

The right publicity would show, in brief, pointed fashion, marked instances of how motor trucks and stages facilitate commerce; of how taxing or restricting them unfairly means taxing and restricting the ultimate consumer.

It would show what highways cost to build and maintain, and what dividends they yield. In California they are said to be yielding 50 per cent per annum on every dollar invested.

It would show, in such way as to convince readers that intense research has been made, what maintenance sum will be needed for roads.

It would show, with convincing assertion as to research, what truck and stage interests should pay toward such maintenance, and in what way it should be paid.

That is a very important point—as to how such taxes should be paid. The present method of taxing, with horsepower as the basis, is foolish and unfair. The ton-mile basis would be the fairest one, the one upon which motor trucks and stages should be placed; and for reasons any student of the subject will recognize as sound, private motor car owners should be taxed on a gasoline-consumption basis. Make a small, nominal charge for the license on any motor vehicle, and then tax trucks and stages per ton mile, according to operator's reports to be made monthly and which, in Maryland, are said to be 90 per cent honest; and tax private passenger cars per gallon of gasoline. Make the rates so that each class will bear its fair share, as nearly as can be calculated, of the total sum necessary to be raised. **The calculations would of course have to consider the estimated costs ahead, and the estimated ton miles and gallons of fuel; and the rates incorporated in legislation should be according to those calculations.**

C.H. WHITE
PLEASE BRING YOUR BASKETS
Fancy Fruits and Vegetables

TOUCHING BUTTON ON RUGGLES TRUCK CALLS 'EM NOW.
Say goodbye to the (sometimes) musical cry of the huckster. One in Columbus, O., has set a new fashion which doubtless will be imitated. He touches a button, and an electric bell, which can be heard much farther than the voice, tells the housewives he is near. He keeps a close schedule, and the idea saves much time and increases the sales territory. This huckster bought a Ruggles 1 ton truck and had the bell put on. The truck has an unusually handsome, efficient body, 5 feet high, painted marble white, with glass windows on all sides. That also hastens business, as the fruits and vegetables, on trays in two decks, can be seen plainly.

One desirable feature of the plan to base taxes on ton miles for trucks and stages, and on gasoline for private passenger cars, is that it could apply not only to intercity traffic but to city traffic. It would lessen the necessity of every little city along motor transportation routes "soaking" operators on those routes, as is done today. In the cities, it would distribute, indirectly, the street improvement burden which really should be distributed by general taxation but which today is loaded onto owners of property which in many instances is not increased in value proportionately to the street improvement assessment.

As to weight limits, Motor West understands data was compiled about a year ago, at great pains, by the Government in co-operation with the American Automobile Association, indicating what loads can be carried on pneumatic and solid tires of various sizes, at given speeds, without unduly affecting highways of different kinds and thicknesses. Compared with that plan, the laws now in effect, not only in California but generally, are mere guess-work. By the right plan, the correct approximate weight limit and speed for any type of vehicle, for any type of road, can be ascertained scientifically and set before the public in such a way that it and the legislature which represents it will be convinced.

The foregoing will be read by approximately 12,000 Motor West readers, in its region of seven Pacific region states and in some Eastern manufacturing centers. The publicity policy suggested would reach from a million to several million minds through newspapers in California, where the specific need exists.

New Standard Truck Announced

To meet the demand for a light delivery speed truck containing standardized quality units, of low original and maintenance cost, comes the new worm drive model 75, chassis price $1330 f.o.b. factory, announced by Standard Motor Truck Co., Detroit. It will take a rating of 1¼ tons pay load, exclusive of the N. A. C. C. body weight allowance. Like the heavier Standard models, it will contain the same units that always have characterized this line—Continental, Timken, Brown-Lipe, Spicer, Eisemann and Stromberg.

The Continental N-3¾x5 water pump engine furnishes the power. The well known Brown-Lipe multiple disc clutch and unit power plant transmission transmits the power through a two-piece Spicer propeller shaft and universal joint assembly to the Timken worm drive rear end.

The axle equipment consists of the Timken 1250 front and 6250 rear worm. The Ross steering gear completes the units. The tire equipment is 33x5 pneumatic cord, front and rear.

Alloy steel springs are used. These are designed to assure ample resiliency and the easy riding qualities sought for today in a truck of this capacity. The all-steel seat and riser, together with the regular standard chassis equipment, including vacuum tank installation, complete the chassis. The wheelbase is 134 inches.

All records of receipts of livestock by trucks for one day were broken recently at the Omaha stockyards. The final count showed that 229 cattle, 46 calves, 2267 hogs and 710 sheep were brought into the yards in trucks.

GMC

General Motors Trucks

To be the possessor of a GMC dealership is to be the one man in your community with the privilege of selling a line of motor trucks with exclusive features of construction which have advanced motor truck transportation further, in the past two years, than it had been advanced in the preceding decade.

No dealer, selling any other motor truck, can obtain the advantages possessed by the GMC selling organization in the quality of the product, in the organization that builds it, and in the price at which it is sold.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton \$1295 *2 Ton \$2375* *3½ Ton \$3600* *5 Ton \$3950*

Chassis Only—At the Factory—Tax to be Added

S.P.-C.P.-U.P. Situation

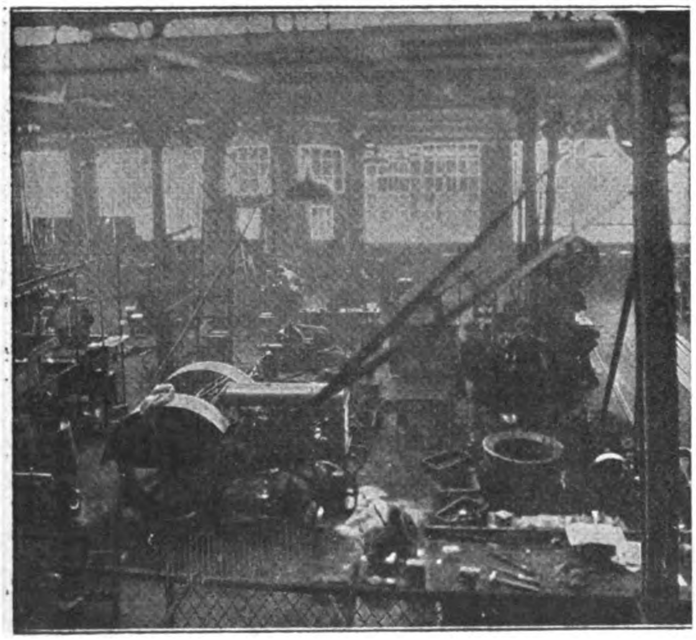
If Supreme Court Decision Disrupts Rail System, People Lose But Motor Transport Gains

ANYTHING involving as much disruption, rearrangement, etc., as the separation of the Central Pacific and Southern Pacific railway systems, costs the public money loss in various way. Yet the public apparently will not do much to nullify the U. S. Supreme Court decision that the two systems must separate.

The court decision, based on suit brought by the Government in 1914, after the Sherman anti-trust act passed, is that the act voided the lease of the Central Pacific to the Southern Pacific, because S. P. lines through Texas compete with the northern route through Ogden. The S. P. comment is that public demand brought about the connections between the north and south through San Joaquin Valley, and between Southern California and El Paso; that Congress approved; that it was to develop the resources of the vast region; and that if the work had been done under one name instead of two, there would be such court decision as has been made.

The decision, it appears, is purely technical and out of tune with present conditions. In fact, the Interstate Commerce Commission, under instructions in the Transportation act which took effect February 28, 1920, has prepared a plan for consolidating railroads into fewer systems; and the Southern Pacific hope appears to be that, somehow, through pressure upon state railroad commissions and the Interstate Commerce Commission, disruption may be delayed until the Interstate Commerce Commission takes jurisdiction under the terms of the Transportation act.

The C. P. has been leased to the S. P. 37 years, since February, 1885, when more than five-sixths of the stock of both voted favorably. A map shows the disruption will put the S. P. comparatively out of Nevada, and take essential portions out of its extensive S. P. system in California, and a little in Oregon. All sections will continue to function if the disruption occurs, but not as one unit; and S. P. officials appear to be sure it will occur, but hope that it will not.



DISASTROUS STORM FAILS TO STOP TRANSPORT FACTORY. This interior view of the plant of Transport Truck Co., Mr. Pleasant, Mich., gives no idea of the disastrous aspect outdoors. By using tractors and centrifugal pumps, and its own power plant, the company went right on when, last February, that whole section was cut from communication with the world. Only one train a day entered Mt. Pleasant. On Main St. the water was 18 inches deep. A slight freeze following a heavy rain had done it. On February 22 the Transport factory was flooded with 6 inches of water. Within 24 hours it was in full operation because its personnel had initiative.

If the separation occurs, and hinders commerce, recourse to motor transport naturally will increase accordingly.

The Union Pacific has stated its willingness to buy the Central Pacific. Apparently its buying all portions would mean commercially hostile ownership of some of the very vertebrae of the S. P. system on the Coast. If such purchase were made, however, transportation would go on approximately as it would if the ordered separation resulted in the C. P. again becoming an independent organization.

A Southern Pacific statement says records show it and the C. P. were held in common ownership as early as October, 1870, and have been under common control and management 50 years, since July, 1872; that one or the other extended its lines at various times, according to which could raise money the easiest; that the C. P. owed the Government much money, and the S. P. helped it pay the debt, and in railroad construction; that thus the two did what one company could not do alone, under the circumstances of the time; and that though there are two company names, practically the system is one.

Railroad Commission Control Idea

A new idea every minute; not always a good one. A movement, said to be sponsored by the California state body of real estate men, is to have all for-hire motor trucks and stages controlled by the state railroad commission. Just why the real estate men should desire this is a mystery. Anyway, the motor truck and stage men do not desire it, and Councilman O. T. Conaway of Los Angeles had that body pass a resolution opposing the plan.

It also is proposed that the same commission become arbiters over interurban railways, and be empowered to grant them "indeterminate"—i. e., perpetual— franchises. That would enable them to forever stop motor transport "interfering" with their lines, or to monopolize any such transportation of passengers and freight.

Two Republics on Michigan Tour

The first time that an interurban stage has participated in a cross-country tour, is the distinction accorded the Around Lake Michigan tour, of the Michigan Pikes Association, which left Detroit July 7 on a 14 day circuit of Lake Michigan, through Michigan, Indiana, Illinois and Wisconsin, with the Michigan copper country its northern terminus.

The passenger bus was entered by Republic Motor Truck Co., Alma, Mich. It has a passenger capacity of 14, in addition to the driver, and is known as the Rapid Transit express model. It is mounted on pneumatics and travels at passenger car speeds. The Republic factory also entered a Rapid Transit express model to transport the cots and blankets of the tourists.

Moreland's Portland Branch Opens

Portland now is Pacific Northwest headquarters for Moreland Truck Co., of Los Angeles. A factory branch has been opened to handle the wholesale trade throughout Oregon, Washington and Idaho. C. H. Smith, who has been with Moreland since the company began, and who for the past couple of years has been in charge of Northwest interests, is the branch manager. The quarters are at Fourteenth and Morrison Sts. A retail company to handle the Moreland truck in the immediate Portland field has been formed also, and is at the same location. It is named Moreland Motor Truck Co. and is composed of F. H. Nash, an experienced truck man, C. E. Johnson and W. M. Fried, all well known business men of the Rose City.

Tractor Department

Facts Affecting Tractor Interests

THE farmer's buying power depends, to a considerable degree, upon what living costs him; more upon that than upon his profits, which are not yet anything to brag about though prices are better for him than they were. His cost of living probably is well indicated by mail order catalogs. A diagram printed in the June 13 issue of Cleveland Trust Co.'s business bulletin shows price levels of 24 articles listed in such catalogs, each spring and autumn since 1917, with the level of 1913 used as the basis for all. Costs above this basis have been: 1917—spring, 40 per cent; autumn, 61 per cent; 1918—spring, 88; autumn, 110; 1919—spring, 138; autumn, 125; 1920—spring, 169; autumn, 204; 1921—spring, 70; autumn, 51; 1922—spring, 46; which is only a slight percentage higher than in the spring of 1916.

In recent weeks, the buying power of the farmer has greatly improved. He is able to sell his produce to greater advantage and he can buy at much lower rates. As a result a great improvement in rural business is taking place even before the harvesting of the new crops, and both Sears, Roebuck & Co. and Montgomery, Ward & Co. reported notable increases in sales for the month of May.

If farming communities will restrain, a little, the quite human impulse to squander a bit when relatively good times return; and if they will perceive more clearly than the average citizen does that electing new persons or parties into political power, relatively, is a poor way to create better times, and that diverting available public funds, through congress, from other purposes to making farm life easier, is not basically the best productive process; and if, on the other hand, farming communities will realize how much **transportation** affects their immediate and prospective welfare, they will have grasped something worth many millions to themselves, and to those who want to sell to them, including tractor men. Read on:

In 1918 the cost of wagon haulage from farm to shipping point averaged about 30 cents per ton mile for wheat, 33 cents for corn, 48 cents for cotton, while in the same year, by motor truck or highway tractor, the averages were only 15 cents for wheat and corn and 18 cents for cotton. Those three products are taken merely as examples. Assume 1,000,000 tons of each are transported an average of 10 miles to shipping points. The total saving is $11,100,000. If applied to 30 products instead of only three, it is $111,000,000 a year, of $1,110,000,000 in ten years. That, or any noticeable part of it, applicable to expanded production and the implements for it, seems well worth saving, and the one big way to begin to get it is—to **build more good roads.**

"Don't lean too much on Congress or on Federal aid; help yourselves more," is the pith of the implied advice to farmers in the recent second report of the Joint Congressional Commission of Agricultural Inquiry. Its first report was on freight rates on farm products. This second report points out plainly the need of more self-help by farmers to bring the 2,500,000 miles of rural roads to a standard suitable for motor transportation, which means not only sharp reductions in immediate cost of production and delivery, but hugely broadened markets. To thus improve the vast mileage of rural roads will take a very large sum of money. The investment must be made on the installment plan. The sooner the investment is begun the sooner farmer prosperity and purchasing power will be enhanced to what, from the viewpoint of today, some day will be marvelous.

Manufacturers of tractors and other farm machinery would help themselves much by putting such facts as the foregoing before farmers, in printed matter distributed through their dealers, particularly in articles they could have printed easily in agricultural and country newspapers. The writer is reminded of what Col. Albert A. Pope, pioneer bicycle manufacturer, did. He, by the way, was regarded by many of his personal friends as somewhat looney for going into the bicycle business at all. He did, though. He advertised, and kept on advertising even when two years behind orders. He not only talked and wrote good roads propaganda when the good roads movement was about on a par, in general estimation, with "women's rights stuff", but he gave what seemed unduly large sums of his own money to highway projects. Similar attention by manufacturers whose customers are farmers, to the matter of getting rural roads into motor-transport condition—leaving to others the continuance of the present momentum as to main interstate and intercounty highways—would pay big dividends.

There is general ignorance of the dollars-and-cents meaning of the fact that agriculture is the basic industry. Even by many who depend directly upon that industry, the fact is stated about as emptily as though it were a mere phrase. What it really means, at this time, is that the unsatisfactory condition of the country's chief, basic industry is what is hindering general business revival most. Analysis would show that, compared with this fact, labor trouble, causing more than 1,000,000 factory and similar workers to be on strike at this time, is a relatively minor cause, as are all others compared with what has been, and still is, ailing agriculture. If agriculture were as prosperous as it should be, and would be if its importance were understood, everybody else would be so prosperous that labor trouble—i. e., efforts of labor to get more than employers feel they can pay—ought to fade away. Money spent to get legislative and other influences, that can facilitate return of agricultural prosperity, to realize this, would be well spent.

When agriculture thrives, so do workers and employers in manufacturing, transportation and merchandising. Disturbance of any injures all, but disturbing agriculture's prosperity does more injury to all, than all other factors combined.

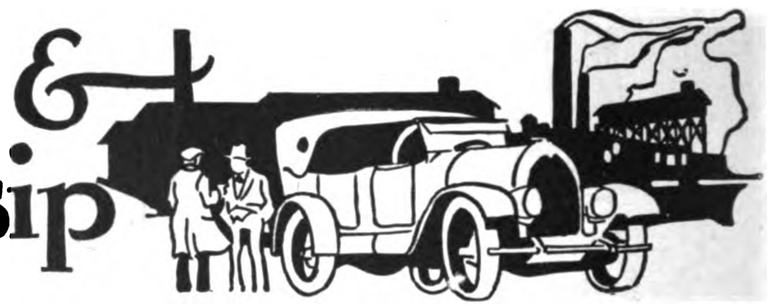
Twenty-nine states are now co-operating with the United States Department of Agriculture in estimating crops and live stock.

You are bound to succeed if you do your work with the same efficiency your mother used to sew on a button on your short trousers.

Most farmers buy low priced tires, the Capper farm research bureau found.

No person ever graduates from the School of Experience.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

According to all testimony of the 800 and more delegates to the recent national convention of the Automotive Equipment Association held at Colorado Springs, there has been a very healthy comeback of business. For two years there had been tough times for them. The slump which started in 1920 hit makers of equipment harder than it hit the car or truck makers. People purchased cars, some cars and some trucks, but the little extras that add so much to the enjoyment of motoring were not purchased. The Automotive Equipment Association is composed of the makers and jobbers of equipment, distributors and garage men of the world. Each year this organization holds its "spring" convention in early summer, and in the fall it holds a show at Chicago, with only trade members admitted. For the last two years the big Chicago exhibit has been a sad affair, with little business done, and the association members have been gloomy. Now all is changed. Delegates went to the recent convention in private cars, special trains and by motor car. They went from both coasts, and from Canada and Mexico.

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As a model for other trade gatherings, those of the Automotive Equipment Association convention stand high. The members gather to talk business, and Commissioner Webster is the boy to hold them to business. They have fun, too; but no rough stuff.

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In Detroit, employment is 50,000 more than at the same time in 1921. Thousands of workmen have returned who left during the slump. At Toledo, Indianapolis, Cleveland, Lansing, Flint, and other automotive manufacturing centers, reports vie with those of Detroit, and a report from Dayton states that the industry has recuperated completely.

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The expected summer slump has come in other businesses, but as yet there has been no sign of it in the automobile business. Makers, however, are prepared for what they consider inevitable. However, even those who say so plainly are ordering under specified-deliveries non-cancelable contracts right through until October, and the parts and accessory men say that there has been no apparent depreciation in specifications for the summer.

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Those who talk in a pessimistic strain probably have not analyzed the situation of the farmer. In a trip to the annual convention of the Automotive Equipment Association, at Colorado Springs, the writer talked with farmers in Illinois, Iowa, Nebraska, Colorado, the Dakotas and Kansas, and found them all optimistic. They were very candid in stating that after the harvesting of the wheat crop they would be in the market for motor cars and equipment. For two years these farmers have been wearing out the old cars. Out in Nebraska, as the train passed through, there was seen at a small station an immense field of abandoned cars, all of which had been run until they could be run no farther, and disposed of then to the junk men, who had great piles of material ready for shipment after tearing them apart and cutting the frames and bodies into lengths suitable for baling. This junk yard illustrated the condition of the motor cars owned by the farmers after the last two years of bad times, better than anything else could have done. The farmers interviewed stated unequivocally that the farmer of today could not and would not get along without motor power, passenger cars, trucks and tractors, and that conditions which in some cases have forced a return to horses have illustrated, better than anything else could have done, the need of automotive equipment on the farm, both for business and the necessities of the family. The present crops coming in will show a good profit, as labor cost to farmers is normal and production costs low. Having held his last year's crop for better prices and disposed of it this year, the farmer is in pretty good shape. Taken all in all, the farmer business will be enormous and will follow the present record breaking business of the makers of automobiles.

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The manufacturers are making more money than they ever made before, and the parts, accessory and equipment men say things will have to change soon and that there will come, without any doubt, an increase in prices. They stated this at their convention at Colorado Springs, and afterward, and yet one prominent maker announced a reduction early in July. The motor and accessory men claim that while their business never was better, they are manufacturing at a figure which is very close to cost prices; in some instances lower than cost. Competition is very keen in this field, and manufacturers of cars are buying to better advantage than ever before. This has benefited the user. One of these days, however, the motor and accessory men will have the upper hand and force an increase. Then will come an increase in car prices.

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Throughout motordom, California is pointed to as a barometer always. With the multiplicity of cars found in that state, one to every 4½ persons, sales increased from 9046 in April, 1921, to 12,251 in April, 1922, with an equally large gain in March. These figures cannot be attributed to tourist traffic, for that ends with April, to a large extent, as far as Eastern people are concerned; and western tourists who make California a happy summer hunting ground do not arrive until later. So gains in California are evidence that the motor car is such a necessity to life that replacements must be made, and undoubtedly that class of trade consumes a large part of the gain, with the natural increase among the recently grown-up babies. The California conditions are now reflected in many other states. The demand is not spotty any more, and demands are such as to delay deliveries. A man who sought any one of several well known and popular makes recently found it impossible, in the city of New York, to get a delivery in less than four weeks. Through a friend he was able to obtain the demonstrator car of a distributor, who offered a premium to get the car back. The deal had been made by an enthusiastic salesman.

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As the result of the demand there has grown competition for labor, and makers, both of automobiles and parts, have again started bidding against each other in the labor market. Premiums also have been paid for prompt deliveries of materials, and again we hear of express shipments. It is stated that the disposition today is to place orders for not more than 60 days ahead, and that complicates the situation, for the accessory and parts makers will not manufacture materials ahead as of old and take chances. Theirs was a most bitter experience following the war.

Two Oakland Officials Toasted.

Two hundred officials and department heads of Oakland Motor Car Co., Pontiac, Mich., assembled at the Brookline Country Club recently and paid tribute to George H. Hannum, president and general manager, and E. M. Orr, assistant general manager, on the completion of their first year's work with the company.

C. J. Nephler, general sales manager, was toastmaster. He warmly commended the work of Mr. Hannum in the production of a new model that, he said, has been proclaimed the best Oakland ever turned out. The two honor guests were given appropriate gifts, Mr. Orr receiving in addition a huge badge, gun, and ball-and-chain, in commemoration of his recent appointment as deputy sheriff of Oakland County.

Previous to joining the company, Mr. Hannum was president and general manager of Saginaw Products Co., a division of General Motors. Before that he was superintendent of Detroit Lubricating Co. He has held important executive positions with the Auto Car Co., Electro-Dynamic Co., Cramp Shipbuilding Co., and New York Shipbuilding Co.

Mr. Orr has been factory manager of the Republic Truck Co., foreman at the Buick, chief inspector at Studebaker, and superintendent of Marquette Motor Car Co.

Congratulatory telegrams were received from more than 25 of the Oakland branches throughout the United States.

* * *

Firestone Dividend, and Big June.

Firestone Tire & Rubber Co. declared its quarterly 1½ per cent dividend, on its 6 per cent preferred stock, payable July 15, and the quarterly dividend on the 7 per cent preferred, payable August 15.

June was the best month in actual number of tire sales since the company began, 22 years ago, greatly exceeding expectations and taxing production. In the month more than 500 carloads, or 700,000 tires, were shipped.

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Bliss Made Nash Sales Manager.

C. H. Bliss has been appointed sales manager of Nash Motors Co., Kenosha, Wis., to succeed W. W. Smith, who has taken the direct factory distribution for the Nash at Oklahoma City. Mr. Bliss joined the Nash organization five years ago, when he went into the shops and worked on construction of the Nash car. Mr. Smith was identified with the factory since its organization.

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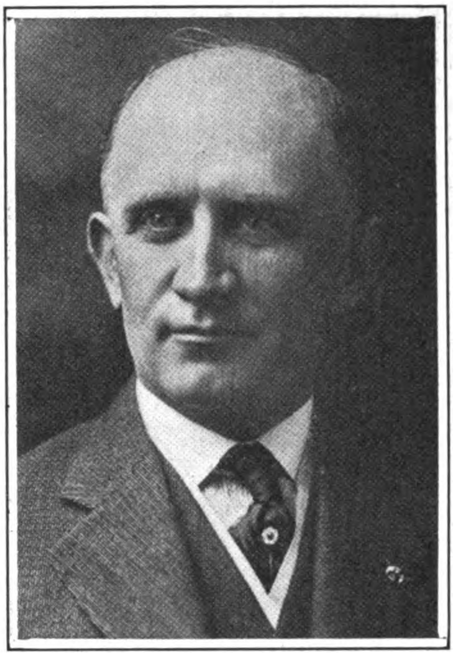
Chrysler's Maxwell Work Praised.

Prior to his departure on a vacation trip with Mrs. Chrysler to Europe, Walter P. Chrysler, chairman of the Maxwell management committee, was given a dinner at the Metropolitan Club, New York, in recognition of his achievement in placing the Maxwell organization once more in a strong position. Fifty prominent executives, representing financial interests, assembled to honor Mr. Chrysler.



GEORGE H. HANNUM,
President and General Manager, Oakland Motor Car Co., Pontiac, Mich.

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Schwab Heads Pneumatic Tool Co.

Chicago Pneumatic Tool Co. has acquired Charles M. Schwab, head of Bethlehem Steel, as chairman of its board. He succeeds John R. McGinley, who remains a director.

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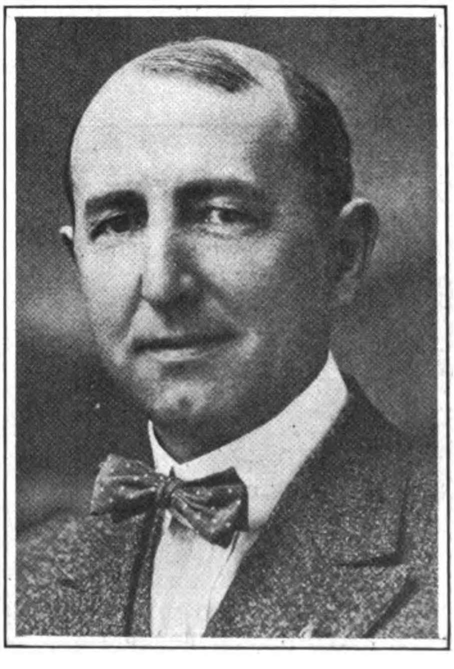
W. P. Loveless, sales manager for the Wm. R. Johnston Mfg. Co., Chicago, has been made assistant to the president, in charge of sales and advertising.



E. M. ORR,
Assistant General Manager, Oakland Motor Car Co., Pontiac, Mich.

Auburn Men in Elkhart Company.

Four former executives in Auburn Automobile Co., Auburn, Ind., have bought holdings in Elkhart Carriage & Motor Co., Elkhart, Ind. They are F. B. Sears, W. H. Dennison, G. W. Bundy and A. N. Graffis. They will take up residence in Elkhart. Mr. Sears has been elected president and general manager; Mr. Graffis, secretary; Mr. Dennison, treasurer; Mr. Bundy, general superintendent. James A. Bell and W. H. Petterson, retaining their holdings in the company, are vice presidents. U. G. Manning, of the former regime, also retains his holdings.

Mr. Sears was with the Auburn Co. 14 years and was assistant manager and treasurer when he retired. Mr. Dennison was with the same company, also 14 years, and was secretary and director. Mr. Bundy, who was general superintendent of Auburn, has been in the industry 13 years; and Mr Graffis, who was Auburn's chief engineer and designer, has been engaged in the building of automobiles 15 years.

The Elkhart company is one of the oldest institutions in that city—established in 1873. It had a world-wide trade in carriages and harness. In 1908 it made the Pratt-Elkhart motor car, and in 1915 the Elcar. Frederick M. Pratt founded the company, and the new executives bought the Pratt holdings.

* * *

Ollier Leaves Studebaker.

L. J. Ollier has resigned as vice president in charge of Studebaker export sales, is retiring from business and will make an extended European trip. His retirement ends a long period of service with Studebaker. He started as a salesman, and by successive promotions rose to branch manager at Los Angeles, sales manager at Detroit, and vice president in charge of sales. Harry A. Biggs, vice president in charge of domestic sales, will direct both domestic and export sales in future. H. S. Vance, assistant to the president, has been appointed manager of export sales, under Mr. Biggs.

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McDonnell Leaves Kelly-Springfield.

E. O. McDonnell has resigned as general manager and vice president of Kelly-Springfield Motor Truck Co., and is succeeded by Frank H. Pietsch. P. A. Lewis has been named assistant general manager. As there are a number of important matters unfinished, of which Mr. McDonnell has special knowledge, he will continue as vice president until August 1. While relations with the company are most cordial, Mr. McDonnell says he expects to be associated with the same interests with which he was connected before going to Kelly-Springfield.

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Peck Is Traffic Co. Sales Head.

Charles C. Peck, Jr., has been appointed general sales manager of Traffic Motor Truck Co., St. Louis. He has been with the company three years.

Ruggles Secures Goldie.

R. J. Goldie, for six years factory manager of Columbia Axle Co., has been appointed general manager of Ruggles Motor Truck Co., Saginaw, Mich. President Frank W. Ruggles, who had been functioning as general manager since the foundation of the company, will devote himself to the wider interests of the business.

Mr. Goldie has won recognition in the automotive industry as an organizer. He is said to have the magic "Midas touch," as every company with which he has been identified has prospered.

Years ago he built one of the first 1500 pound motor trucks used in Detroit. It was used for 5 years to deliver pies. As Mr. Goldie whimsically puts it, "This truck laid the foundation of the motion picture industry, and thereby made a fortune for Charlie Chaplin."

He also built the first Oakland automobile, another success. He drove an Oakland car in the 1908 Glidden tour, a 2 cylindered vertical engine affair that was considered the gnat's eyebrows in those days.

After two years with the Oakland, the Chalmers organization recognized the good fortune that came to concerns when the name Goldie was on the payroll, and secured him as chief inspector and superintendent for the Chalmers plant. The Chalmers, it will be noted, is another company that is still in the ring and going strong.

Chalmers was able to retain Mr. Goldie just 5 years, when he felt the call of specialized manufacture and joined the Timken-Detroit Axle Co. as manager of its East Side plant. He spent 5 years with the Timken-Detroit organization, contributing materially to its success, and in 1916 became factory manager and member of the board of directors of Columbia Axle Co. He retains his place on the directorate of that company.

R. J. GOLDIE,
General Manager Ruggles Motor Truck Co. of Saginaw, Mich.

Fraser Is Chandler Purchasing Agent.

R. M. Fraser has been made purchasing agent for Chandler Motor Car Co., succeeding the late G. E. McGinnes. Mr. Fraser has been with Chandler a number of years, and recently was manager of service.

* * *

Willoughby Is Columbia Sales Head.

David J. Willoughby, who has been Eastern sales manager for Lalley Light Corp., and more recently traveling sales representative of Dodge Brothers, now is sales manager of Columbia Motors Co., Detroit.

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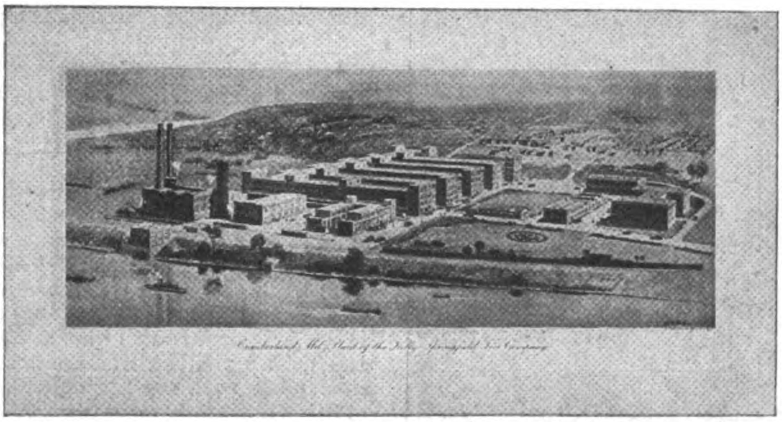
300,000 Willys-Knight Engines.

Wilson Foundry & Machine Co., Pontiac, Mich., has been directed by John N. Willys to prepare for production next year of 300,000 Willys-Knight engines.



Cumberland, Md. Plant of the Kelly Springfield Tire Company

THE CUMBERLAND, MD., PLANT OF KELLY-SPRINGFIELD TIRE CO. BOTH THIS AND THE AKRON PLANT ARE GOING AT FULL CAPACITY. THE COMPANY'S SHIPMENTS THE FIRST HALF OF 1922 EXCEEDED THOSE OF ALL OF 1921.

Buick Starts New Plant August.

On August 1, Buick Motor Co. will start assembling all closed cars in the plant formerly occupied by Scripps-Booth Co. in Detroit, it is announced by H. H. Bassett, president. The new factory contains about 350,000 square feet of floor space and was originally designed for automobile production.

For the past seven months Buick has been outfitting the plant with enameling ovens, conveyor systems, etc. Its capacity will be 400 closed cars per day. Motors, transmission, axles, sheet metal work, radiators and other chassis parts will be received from the plant in Flint in carloads. This reverses the former process. For years all Buick closed bodies have been manufactured in Detroit and sent to Flint by Fisher Body Corp. The new plan means much more direct shipping facilities as well as eliminating the long haul of bodies from Detroit to Flint.

The additional capacity in the Detroit plant also will enable additional open car production at Flint. A much larger manufacturing schedule is necessary on account of the constantly increasing demand.

Mr. Bassett says that when the Detroit plant is in full operation it is expected it will have 750 to 1000 employes.

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Buick Shipment Breaks Record.

All records for shipments of cars during the last 20 years were broken by Buick Motor Co., Flint, Mich., June 23, when a lot of 285 carloads was sent away. The shipment, which surpassed even the records of war boom times in 1920, was composed of 822 cars or seven trainloads of between 35 and 40 cars to a train, and included types of all models. The lot, which went to dealers in all sections of the country, had a total retail value far in excess of $1,000,000 and if placed in a line, end for end, 3 feet apart, would stretch more than 2 miles along a road.

Factory officials report the production demand is such that it bids fair to exceed the 1920 high water mark.

* * *

Auburn Automobile Co. Election.

A. P. Kemp has been elected president and general manager of Auburn Automobile Co., Auburn, Ind., to succeed Morris Eckhart. Mr. Kemp formerly was vice president and treasurer. It is understood Mr. Eckhart plans to retire from active business and travel extensively in Europe for the next two years. Other officers elected are J. I. Farley, vice president; Z. B. Walling, assistant secretary; John Zimmerman, assistant treasurer. W. S. Frederickson recently was elected general sales manager.

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W. L. Kroneberger, formerly sales manager of Commonwealth Motors, Chicago, has been appointed manager of the sales promotion department of the Yellow Cab Mfg. Co., Chicago.

New Davis Phaeton Does Well.

Folks at the factory of George W. Davis Motor Car Co., Richmond, Ind., are pleased with the way the new car, the model 75 Davis Phaeton, described in Motor West June 1, is acting. It is a smaller, lighter six than the other Davis cars and lists at $1195. It averaged 20.6 miles per gallon in an economy run conducted by a Milwaukee newspaper in June. It covered the 216 mile course, averaging 25 miles per hour, with only 10½ gallons of gas. The car then continued until the 15 gallons it carried were used up. The car was taken from the dealer's stock without special preparation and driven by a man of average ability, chosen by the newspaper.

* * *

Still "Fordizing" Lincoln Affairs.

Another indication of complete "Fordization" of Lincoln Motor Co. is the closing of the Lincoln city sales room in Detroit and removal of its functions to Ford sales and service headquarters at Highland Park, suburb. In addition, each of the 22 Ford agencies in Detroit becomes a Lincoln agent and service station. Sales and service of Ford cars already are established in the Lincoln plant. It is understood further concentration of executive headquarters of all Ford industries includes moving E. G. Liebold, Mr. Ford's private secretary, and the laboratory, from Dearborn, the home of Dearborn Independent, Ford's paper, to the Lincoln plant.

* * *

Hyatt Division Changes.

General Motors Corp. announces that J. G. Weiss has retired from active duties of general manager of the Hyatt Bearing Division on account of his health, but remains in the Hyatt Co. in an advisory capacity. H. J. Forsythe, formerly assistant general manager has been appointed general manager.

B. G. Koether in addition to his duties as vice president in charge of sales, becomes assistant general manager. Remember his quaintly human "quieterion" philosophy Too bad he had to drop it.

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Butterfield Resigns from Apex.

C. W. Butterfield, assistant general manager in charge of sales of Apex Motor Corp., Ypsilanti, Mich., manufacturer of Ace automobiles, has resigned. Before joining Apex Mr. Butterfield was sales manager of Herschell-Spillman Motor Co., North Tonawanda, N. Y. No announucement has been made as to his plans.

* * *

Cole Prosperity.

The Cole Motor Car Co., Indianapolis, is running 100 per cent ahead of last year's production, and at 85 per cent of capacity, says J. J. Cole, president and general manager.

Mr. Cole believes demand will continue to increase during the summer and throughout the winter months, because smaller dealers, in agricultural districts, are ordering cars for delivery during summer months, and with the harvesting of enormous crops, business with them is going to be better than it has been for a year or two.

The balance sheet issued by the company May 1 showed it to be unusually strong, with assets of $3,561,629, current liabilities only $327,671, and surplus $2,233,958. On May 10 it paid a 10 per cent dividend to all stockholders, this being the semi-annual payment; and from all appearances October will see a similar distribution of profits. For the past five years all stockholders have been paid not less than 20 per cent cash dividends per year.

* * *

Abroad for General Motors.

Among the passengers on the Majestic, sailing recently from New York, were John J. Raskob, chairman finance committee of General Motors Corp., and A. H. Swayne, vice president of General Motors Corp. in charge of relations with banks, have gone abroad. Mr. Raskob will visit London and Paris and Mr. Swayne will in addition go to Germany and Austria. While their trip is in the nature of a vacation they will also look after interests of General Motors in Great Britain and on the Continent.

SITUATION DIGESTED.

The revival of industry is continuing slowly and without dangerous inflation, according to the Industrial Digest, which bases its judgment upon an examination of 1000 trade and technical magazines and newspapers, covering every important industry. Business leaders of the country seem to realize that it is dangerous to try to go ahead too fast in a period like the present. This spirit is showing itself especially in the building construction industry, which has enjoyed a nationwide boom, and in which leaders are already cautioning the trade against over-extension.

* * *

GMC V. P. Goes Abroad.

Alfred P. Sloan, Jr., vice president of General Motors Corp., in charge of operations, sailed with Mrs. Sloan on the Aquitania, July 4, for Europe. On his trip, which will be "in the nature of a vacation," Mr. Sloan will visit England, France and Switzerland. In London and Paris he will look over General Motors interests in the two capitals.

* * *

To Auction Berling Magneto Plant.

The factory, grounds and equipment of Ericsson Mfg. Co., Buffalo, will be sold at auction July 25. The plant consists of a comparatively new brick building of 75,000 square feet of floor space, a garage for 20 cars, and a complete line of equipment designed to turn out 500 Berling magnetos daily.

Merrill Made Appleton Sales Head.

Arthur S. Merrill, formerly sales manager for Chicago Fuse Mfg. Co., and well known to the electrical trade, now is general sales manager of Appleton Electric Co., Chicago, with headquarters at Chicago office.

In addition to its branch office and warehouse in New York City, Appleton also has resident representatives in Atlanta, Boston, Cleveland, Detroit, Los Angeles, Oklahoma City, Philadelphia, Pittsburgh, Portland, Ore., St. Louis and San Francisco.

The company manufactures conduit fittings, lighting and other specialties.

* * *

Bramley Pulls Templar from Hole.

Through the personal efforts of M. F. Bramley, president and general manager, there has been marked improvement in the affairs of Templar Motors Co., Cleveland. The committee of creditors, which took charge some time ago, has been disbanded, and the plan of the Templar syndicate has been declared effective. Under this the creditors have agreed to accept 66 2/3 per cent of their claims in full settlement of all obligations. Production steadily is increasing, and there is every indication that the company will be successful under the Bramley management.

* * *

Churchill Goes and Does It.

Charles W. Churchill, who supervises special sales work in conjunction with E. T. Strong, general sales manager of Buick Motor Co., Flint, Mich., surprised his many friends recently by his marriage to Miss Edna Anola Stallsmith, at Lithopolis, O. Mr. Churchill had been regarded for many years as a confirmed bachelor.

* * *

Floyd Smith Is Asst. G. M. of Simms.

On July 1 Floyd H. Smith, formerly with Pierce-Arrow Motor Car Co., Buffalo, N. Y., as director of purchases, became associated with Simms Magneto Co., East Orange, N. J., as assistant general manager. Mr. Smith's many years of experience in the automobile and motor industries specially fit him for the position.

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Gardner Production Hums.

Production of the Gardner Motor Co., St. Louis, for the first 5 months of this year, exceeded 3400 cars, compared with 3800 in all of 1921. It is estimated 1922 production will be 8000 to 9000 cars.

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Mason Buys Owen Plant.

Mason Tire & Rubber Co., Kent, O., has purchased the Owen tire plant at Bedford, O., and will use it to make cord tires as Ford equipment, with initial output 1500 tires a day.

* * *

Founder of Ajax Rubber Co. Dies.

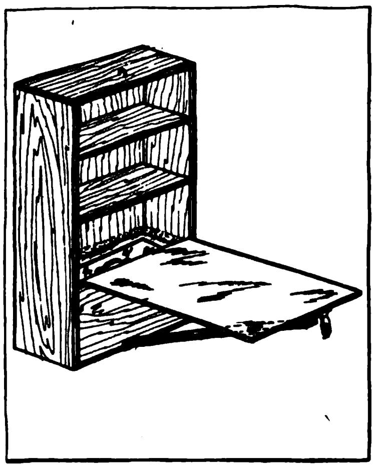
William G. Grieb, founder and former president of Ajax Rubber Co., died suddenly June 14 at his home in Scarsdale, N. Y., at the age of 64 years.

Motorists' Letter-Box

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

CUPBOARD FOR TRAVELERS.

Editor Motor West: I am contemplating making a long trip, which will take at the least several months. I have my tent, stove and all equipment for camping excepting a space for supplies of groceries and a table. Can you give some pointers or make a suggestion?—H. D., Spokane, Wash.



CUPBOARD FOR TOURISTS.

The illustration shows a cupboard made of ordinary ceiling lumber. It is made very easily. As to dimensions, build it according to the size of your car. It should be placed on the right hand running board, between the front and rear doors, allowing sufficient room to open the doors; so the space between the doors will determine the width. It should be high enough to set on the running board and come just flush with side of car at the top or edge of front seat. It can be made of proper size to fit any car, but must be built on the car on which it is intended to be used. The cupboard door drops down, having a piece extending from the hasp at the top to the bottom of the cupboard, forming a bracket when the door is down. This piece forming the bracket should be hinged to the door at the top, so it will fold out of the way when the door is closed. In this way the door, when lowered, will make a good strong table, giving ample room for serving all meals. The bottom compartment can be lined, and packed with sawdust between the lining and outer wall, and so serve as a refrigerator. You may decide the number of shelves needed. You will find this a very complete and satisfactory piece of furniture for camping.

MAXWELL REAR BEARING

Editor Motor West: Please tell me how to take up the rear bearing in my 1919 Maxwell.—A. D. S., Los Angeles.

Get a special angle socket wrench to reach the nuts, take out the necessary shims, enough on both sides to bring bearing snug without binding, tighten nuts, and job is done. The wrench is obtainable at any supply house, or, in Los Angeles, may be rented at Candee's Fix It Yourself garage.

TIPS FOR MOTORISTS.

Economize on lights.

Never use a battery in a leaky condition.

Test the gravity of all cells with a hydrometer syringe.

Never allow the battery to become overheated in service.

Keep distilled water in battery so that solution comes about half an inch above the top of the plates.

Scoring often is caused by the lack of oil.

Never operate a car with worn out brakes.

Reckless driving is not a demonstration of skill.

Always partly inflate a tube before inserting it in the casing.

Driving a car with the spark retarded will overheat and carbonize the engine.

Use finely powered carborundum mixed with oil or vaseline when grinding in valves.

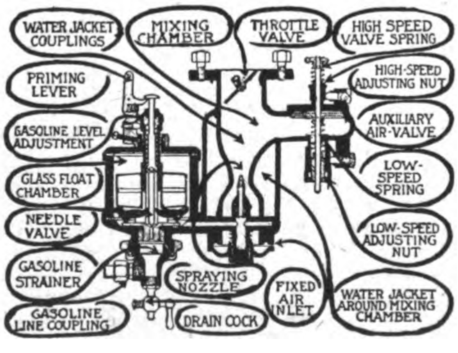
TO WATERPROOF MATCHES.

To waterproof matches, melt a few lumps of candle wax and let it cool a little, then dip the matches, one by one, in the wax, half their length. After cooling, matches can stand in water many hours, safely. In scratching do it more firmly than usual. The wax helps make a good flame.

STROMBERG CARBURETOR.

Editor Motor West: My car has a Stromberg carburetor, model A. The car runs good except at lower speeds, but when I stop the carburetor leaks continually. What would cause it to do this? Can you help me with the adjustment also?—A. N. L., Boise, Idaho.

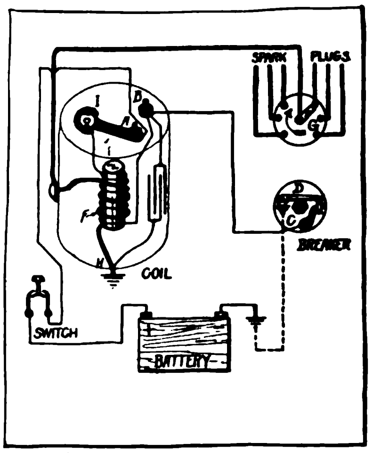
The cause of the leak is either the float valve not seating or the float is filled with gas, causing it to be heavy, which would allow the gas to rise too high, overflowing the spray nozzle. Replace this with a new float valve or float. In the illustration all parts of the carburetor are named and the adjustments indicated. When the engine is running at low speed, adjust by means of low speed adjustment until it runs best. Next, adjust by means of high speed adjustment until engine accelerates properly and runs best at this speed.



STROMBERG CARBURETOR, MODEL A.

REMY BATTERY IGNITION

Editor Motor West: I notice a great many cars have Remy battery type ignition and I am having some trouble with the wiring. How should I wire a two-post Remy coil as used on the Oakland 34C? I have a large service station and do a great amount of work on Oakland cars. Why is the resistence unit placed on the top of coil?—T. L., Denver, Colo.

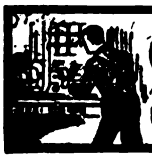


REMY BATTERY IGNITION.

In the illustration is shown the complete wiring diagram of a Remy two-post coil. There are two circuits in any ignition coil, primary and secondary. When the switch and breaker are closed the current will flow from the positive pole of battery, marked +, through the switch to the terminal on the coil, marked A, through the resistance unit and primary winding of the coil to the terminal, marked B, and through the connecting wire to the insulated side of the breaker, marked C, across the points to the lever marked D, which is grounded. The current then passes through the frame of car to the negative pole of the battery, marked —. This current magnetizes the iron core E in the coil, which sets up a magnetic field around the secondary winding, F. At the instant the spark is needed the breaker points open, stopping the flow of primary current, which causes the core E to demagnetize so quickly that the abrupt change in the magnetic field generates or induces a new current of high voltage in the secondary winding F. This current flows out through the distributor to the spark plug, jumps the gap, producing a spark, and returns through the metal of the engine to the ground end of the secondary winding, H. The bottom of this coil is metal and is held in a metal bracket connecting it with the metal of the engine.

The resistance unit I on the top of coil acts as a choke in the primary circuit. It will let current enough pass to operate the coil, but will not let enough pass through the primary winding to injure coil under any condition. If you should leave the switch closed (with engine not running) and the breaker closed it would allow the primary current to flow continually. If it was not for the resistance unit it would burn the coil.

A carburetor lives about two years.

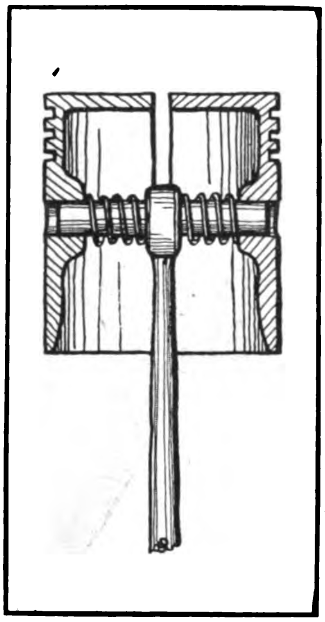


Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

TRUING UP CYLINDERS.

If the travel of the piston is considered—the thousands of trips it makes up and down in the cylinder—the wearing of cylinders is no mystery. On account of the rotary motion of the crankshaft the piston has a tendency to slap in the cylinder. This causes much wear on each side of the cylinders and practically none at the ends of the wristpin. In this case it is impossible for the rings to maintain a tight joint, and the cylinder has no compression, and oil is liable to be pumped into the combustion chamber, fouling the plugs.



CYLINDER-TRUING PISTON.

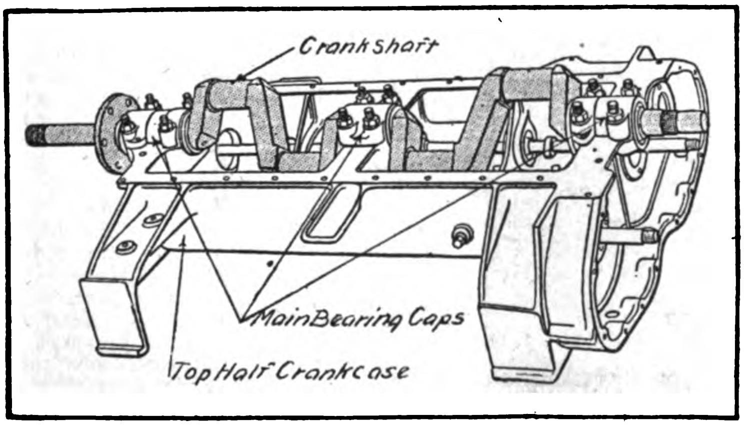
If the cylinder shows much wear it is best to have it rebored or reground and oversized pistons put in, but if it is not worn badly it can be lapped out by using a split piston and putting in new oversized pistons. A very good tool for lapping out cylinders can be made by sawing an old cylinder in half, as shown in illustration, at right angles to the wristpin, and placing a valve spring on the wristpin on each side of the connecting rod. Next, coat the piston with grinding compound, place the two halves on the wristpin, compressing the springs, and slip it into the cylinder. The pressure from the springs will expand the piston against the cylinder wall, and by turning the piston or revolving it, and at the same time pulling it up and down in the cylinder, it will grind the wall evenly and the cylinder will become true. When the new oversize piston will start into the cylinder, it can then be lapped in with compound to a fit or until it will slide through the cylinder. If the cylinder block is removed from chassis it can be placed under a drill press and the end of the rod on the split piston be placed in the chuck, allowing the drill press to drive the piston. The job can be done much quicker and several thousandths can be taken out, by taking a connecting rod with a large eye and grinding the small end down until it is very thin. Bushing can be made to fit this rod for different sized wristpins. Cut off the large end of the rod and grind down to about the size of a half inch drill shank, so it can be chucked easily. Take a small motor and put a chuck on one end of the armature shaft; next put a band around the motor with handles on it. This motor can be used to drive a split piston and it will not be necessary to remove engine from chassis as when drill press is used. Several thousandths can soon be lapped out with this equipment.

ADJUSTING MAIN BEARINGS.

A great many mistakes are made when main bearings are adjusted. These bearings must be in perfect line. If one is not in line with the others it will spring the crankshaft and cause serious trouble.

These bearings always are in two parts, the upper and lower half. The lower halves are called the caps, as shown in illustration. Between the two caps are shims or liners made of thin brass, called shim stock. Due to wear, the shaft becomes loose in the bearings, which will produce a knock.

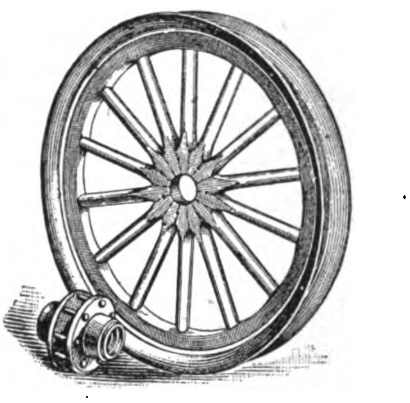
A loose main bearing can be located by short circuiting the spark plugs when the engine is running. If the knock is caused by a connecting rod bearing or wristpin it will decrease when the spark plug in that cylinder is short circuited. If knock is caused by main bearing it will be just the same when any spark plug is short circuited. The loose bearing can then be located by removing the crankcase. Take a bar which can be used as a pry and place it under flywheel or crankshaft, and lift it up and down. When loose bearing is located remove the bearing cap and take out a shim on each side and replace cap and draw nut up tight. If bearing is still loose remove more shims. If too tight put in a thin shim and adjust in this way until it is a good snug fit but does not bind. All main bearings should be taken up the same, if possible, to prevent throwing the shaft out of line. After bearings are adjusted, notice the mesh of the timing gears. If the teeth bottom you will have to put in new bearings. A great many times noisy timing gears are caused by taking up the main bearings without any reference to the timing gears.



MAIN BEARING CONSTRUCTION SHOWN AS ADJUSTMENT AID.

LOOSEN WOODEN SPOKES.

In the artillery type of wheels the spokes often become loose and squeak. In such cases the wheel should be reset. A very good practical repair is to remove hub as shown in cut, next take some sheet metal and cut it in strips, the width of spokes, to be used as shims. Dip each shim in a pot of glue and drive it in between the spokes in the hub. Drive shims parallel to the spokes. Then replace hub and flanges. Be sure the threads on the bolts and in the nuts are good, so they can be drawn up tight. After they are tightened, each bolt should be swelled slightly with hammer to prevent it loosening again.



HUB OUT TO FIX SPOKES.

There is a compound, Spoketite, which can be put into the spokes at the hub, which will cause the spokes to swell and become very tight. If the condition of the wheel is not too bad, it is a very good remedy.

PUT RING IN TOP GROOVE.

When putting in new piston rings and an old ring is used, always put it in the top ring groove, as the top ring is exposed to more intense heat than the others. It is unwise to protect the old ring, and it should be put in the top ring grooves and let a new one be exposed to heat which will soon take the life out of it. The same is true if, when fitting new rings a bad fit is made on any one ring, it should be placed in the top ring groove. Be sure that the slots in the rings are spaced an equal distance apart when the piston is replaced. If these slots are in line or one directly above the other, it will cause a bad leak and oil will pump into the combustion chamber.

Hard grease applied to battery terminals before assembling will prevent their being corroded by acid fumes from the battery.

Put a vacation on your agenda.

New Things in the Accessories Field

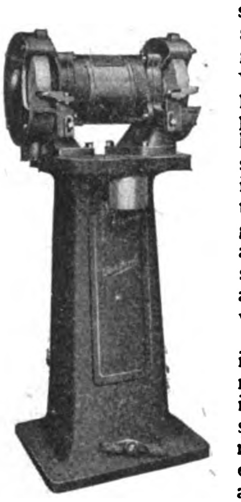
VAN DORN GRINDERS.

Van Dorn Electric Tool Co., Cleveland, O., has lately extended to the users of bench and floor type grinders a complete line of efficient, powerful two-wheel, ball bearing equipped, heavy duty grinders.

These machines are completely equipped, ready to connect to the line and run, without need of extra equipment, and at minimum installation costs.

Safety appliances meet all underwriters' rules. Direct current grinders have automatic starters located inside machine pedestals; alternating current machines have switch and fuses in the same location. With this design it is possible to start and stop the grinders by a convenient foot control pedal at base of pedestal. Motor housings are much smaller than grinding wheel diameters, permitting the grinding of long, and also irregular shaped pieces across the faces of wheels.

Motor ventilation is by suction fan on rotor shaft, inducing air through screened vents in rear or motor, or in exceedingly dusty atmosphere, fresh air can be piped from the outside through an air duct connected to intake. Lubrication of the liberal sized ball bearings, carrying rotor shaft, is accomplished easily by inserting a grease gun in the parts found on top of the housing. Complete protection and safety is given by the heavy guards enclosing the wheels. These can be quickly removed when necessary. Lugs on top of the guards afford means for attaching eye shields when desired. Tool rests can be adjusted in both horizontal and vertical positions to meet various grinding requirements. An aluminum pot, in the top of pedestal, can be easily removed for refilling.



VAN DORN GRINDER.

These heavy-duty grinders are built for hard, dependable, daily service, being dust proof, fool proof, and trouble proof throughout, it is claimed. Factory branches of Van Dorn Electric Tool Co. are maintained at 60-62 Eighth St., San Francisco, and 401 San Fernando Building, Los Angeles.

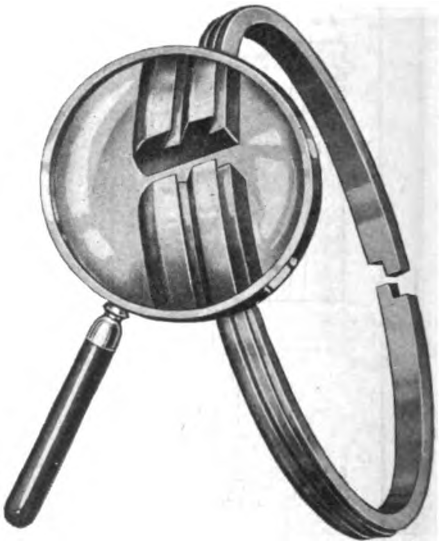
VOIGT AUTOMATIC SIGNAL.

The Voigt automatic turning signal has been developed by F. E. Voigt, 611 South Westmoreland Ave., Los Angeles. It is an automatic signal consisting of a neat control device mounted on the steering column, and a small switch lever which the driver may move to set either the right or left hand turning signal, but which normally is set automatically as the steering wheel is rotated sufficiently far in either direction to begin negotiation of a turn. After the turn is completed the switch lever is returned to neutral by the wheel coming again to straight ahead position, and the signal light is extinguished. According to Mr. Voigt, a car equipped with this device cannot make a turn without giving the proper warning 75 to 100 feet in advance, automatically.

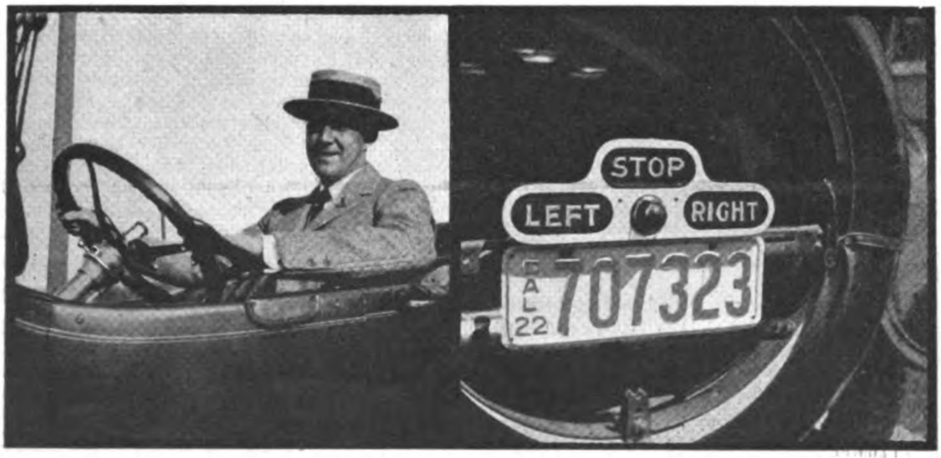
Ordinary play of the steering wheel is provided for by the design, and the signals cannot be affected. Patents are pending on the Voigt device, and the excellent demand already created will be met by the licensing of other manufacturers.

OIL KONTROL RINGS.

Oil Kontrol piston rings are made from individual special-analysis castings, and retain the scale on the inside of the ring as the binder of cast iron and insurance of long and efficient performance. According to Sunset Mfg. Co., 1328 East 6th St., Los Angeles, the manufacturer, minimum wear of cylinder walls is a result of the narrow seat and flexibility of the rings. It takes less than 100 miles of travel to give them perfect seating in the groove, it is claimed. They are designed scientifically to pass over the oil on the piston's up stroke, and wipe it off on the down stroke, thus holding all surplus oil in the crankcase, where it should be, and just enough oil on the cylinder wall to properly lubricate the rings. Sizes up to and including 4 inches sell at $1; more than 4 inches and including 5 inches, at $1.25.



OIL KONTROL PISTON RING.



CAR HAVING VOIGT DEVICE GIVES PROPER SIGNAL AUTOMATICALLY ON TURNING.

SECURITY BOLTS IN NORTH.

Patterson Parts, Inc., with branches in San Francisco, Oakland, Sacramento and Portland, distributing high grade replacement parts in Northern California and Oregon, have added Security spring bolts. These are manufactured by Security Mfg. Co., Los Angeles, from solid bar, special analysis carbon steel, heat treated to provide hard wearing surface and a tough core. They are threaded and drilled to microscopic precision, and fitted with hexagonal heads and knurled underheads, to make an ideal replacement part for use with oil or grease lubrication.

BIFLEX BROADENS.

Through purchase of additional buildings and land, Biflex Products Co., North Chicago, has increased its production capacity for Biflex bumpers 150 per cent.

The property acquired was a detached foundry adjoining the Biflex property, at the junction of two railroads, and ideally situated for quick shipments.

The tract of land now occupied by Biflex embraces 5 acres, permitting further expansion.

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A B CO
CHICAGO ILL.

The Sign of Service

Ahlberg Ground Bearings

for Any Type of

Automotive Equipment

Reduce the cost of upkeep by saving the original parts.

Ahlberg Ground Bearings are bearings which have been in actual service and after becoming worn have been repaired. This is done by regrinding the raceways to their original contour and inserting new oversize balls and our own perfected retainer.

Our twelve years' experience in specializing in the repair of worn bearings has taught us how to do this work in a way that enables us to guarantee satisfaction.

There are thirty-five direct factory owned branches maintained at convenient points to give you service.

Take your old bearings to our nearest branch and exchange them for Ahlberg Ground Bearings.

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Detroit Indianapolis Duluth Kansas City
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No other tire franchise can give you this

Some tire manufacturers emphasize the quality of their products, some lay particular emphasis on their low prices while others boast of the margin of profit which they allow to dealers.

The Kelly-Springfield franchise gives to a satisfactory degree every advantage that any other tire franchise offers and the additional advantage of having the Kelly-Springfield name back of your store.

This alone is valued by many dealers as their greatest asset.

Kelly-Springfield Tire Co.

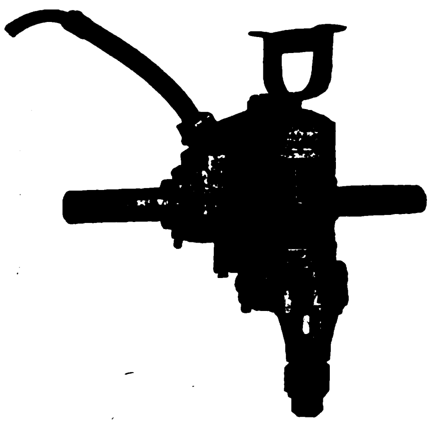
General Sales Dept.
250 West 57th St., New York

VAN DORN ELECTRIC DRILL.

To meet the needs of the garage and repair shops for a light weight general utility repair tool, capable of performing a great variety of operations on car repair jobs, the Van Dorn Electric Tool Co., Cleveland, O., has developed a special portable electric garage drill. Although primarily a drill with maximum capacity for drilling ½ inch holes in steel, it is equipped with a chuck to accommodate an arbor on which a 6 inch grinding wheel, or wire brush, can be mounted.

The tool, weighing only 14½ pounds, is quickly and easily carried to the work, attached to the nearest electric light socket, and readily handled for almost any job. Its great usefulness in drilling holes is most appreciated when bumpers, safety locks, motormeters or shock absorbers are installed, or for drilling out lead terminals in batteries.

Also, a wire brush can be attached in place of the drill, and the tool used for removing dirt and scale on the car before painting, or used for brushing carbon deposit from the top of cylinder blocks. With a small end brush attached, it is an efficient carbon remover, inside cylinders. Buffing and polishing radiator frames, lamp barrels, and any nickeled parts, are other uses. It can be clamped in a vise as a stationary tool for running in piston pins, polishing valve stems, performing disc grinding operations, grinding tools, or buffing and polishing parts that are more easily handled in this manner. Attached to a rigid bench drill stand, it serves as a small size drill press. The bench drill stand is also of Van Dorn manufacture.



VAN DORN ELECTRIC DRILL.

The complete drill, including motor, is Van Dorn built. The motor is universal, adapted for either direct current or alternating current of not over 60 cycles frequency.

Special attachments can be furnished with the drill when ordered. Drill is equipped with 10 feet of cable and plug attached, ready for use. Van Dorn Electric Tool Co. has Coast branches at 60-62 Eighth St., San Francisco, and 401 San Fernando Building, Los Angeles.

MALCO SHIELD CLEANER

The Malco 3 in 1 windshield cleaner has been developed by Malco Products Corp., 146 S. West Temple St., Salt Lake City. Manufactured in one size, it is adaptable to all makes of cars. It may be installed in any one of three ways—attached by a clamp to top of windshield, attached through a hole in the frame without clamp, or with or without clamp to side of windshield. At the clamp a locking nut gives adjustment of wiping bar tension, and makes installation simple and easy.

A notable feature is the V shaped double rubber wiping bar. One rubber edge wipes off heavy moisture, dust, dirt, etc., the other edge wipes the glass clean and dry. The wiping bar is easily and cheaply renewable after it is worn from a few seasons' service, and the cleaner as a whole lasts the life of a car.

The wiping bar bearing allows a movement along the windshield similar to that of a razor on a strop, and an up-and-down adjustment to suit the driver's line of vision. Tension is easily adjustable, and no rattle or looseness can occur. Finished in black enamel with nickeled handle and of handsome appearance. Graf Sales Co., San Francisco, is Pacific Coast representative.

CHALCO LUBRICATOR.

The Chalco automatic chassis lubricator is operated by pressure of the driver's foot on a pedal in the floor board. Oil is thereby forced from a central reservoir, installed in the channel of the car frame, to each and every bearing point on the chassis. Most notable, probably, is the method of regulating the amount of oil supplied to a bearing. This is done by making the branch delivery lines of corresponding lengths. For instance, the rear of the standard rear spring has two bearings to be lubricated; the front end but one. In the Chalco device a secondary supply line leads to a point near this spring, then a short branch line continues to the rear end of the spring, and another twice as long to the front end. Accordingly, the distance the oil must travel determines the amount finally reaching a bearing.

The central combined reservoir and pump, operated by the foot pedal, pump oil into two distributing headers, one on each side of the car, and each supplied with four air chambers of varying area, which are of capacity to hold an exactly correct amount of oil. When pump pressure ceases because the foot pedal is released, a double ended valve in the distributing header opens the secondary supply lines, previously closed, and each air chamber exerts its trapped pressure to force a measured quantity of oil into branch supply lines to the bearings.

The tubing arrangement and assembly throughout the chassis, except for one short length terminating at the front king pins, is rigid, rattle-proof, and practically an integral part of the car. Installation is simple and quick. The reservoir holds oil for 5000 miles' travel, requiring refilling only every 6 months. Manufactured by Chassis Lubricating Corp., 501 Fifth Ave., New York City.

HOW PISTON RINGS FUNCTION.

Exhaustive tests and universal practice among automotive engineers have proved that no one type of design in piston rings will do the several things necessary for highest economy and efficiency, according to C. D. Hellyer, head of Hellyer Steel Parts Co., Los Angeles, distributor of Peerless compression rings, and Oilchek rings.

For instance, he says, the piston must be packed or sealed against leakage of compression and power, and the passing of raw gasoline from combustion chamber to the crankcase, and one locked ring must be used to prevent this leakage.

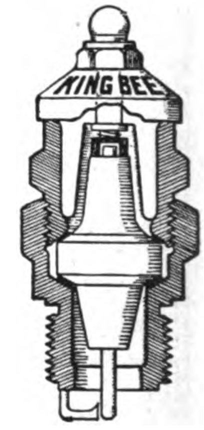
Also, the constant waste of lubricating oil occurring in the average engine must be stopped. To do this, Mr. Hellyer states, a ring must be used with a beveled upper edge which slides over the heavy oil film on the cylinder wall on its upward stroke. The same ring should have a sharp edged groove cut on the bottom edge, to pocket and carry back to the crankcase any surplus sticking to cylinder walls because of good lubricating viscosity. Thus the cylinder walls are left clean for two or three other rings on a piston, the oil wiping ring being used preferably on the piston bottom groove.

Next, a piston will use a plain step-cut, or lap joint ring on the top groove. This ring has the same simple cut groove on the bottom edge for two reasons—first, that a small supply of oil may be caught and held for use near the piston top, where the greatest heat is; second, that this small supply of oil may also seal the bottom side of the top ring while supplying the lubricant where it is most needed at all times.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

KING BEE SPARK PLUG.

It is claimed for the King Bee spark plug that it will fire perfectly in either high or low cylinder compression; that the porcelains will not crack or burn; and that the points will not burn. It has an intensifier in the airtight chamber which is said to increase the spark about 100 per cent, exploding not only low grade gasoline vapor but giving perfect firing also in oil-pumping cylinders. The intensifier is self-adjustable by a compression spring, is fool-proof, and will not burn out the oil. The universal terminal is of special design for any terminal connection. Electrode and ground wire are of monel metal, which will not burn. The plug is made in all sizes to fit automobiles, trucks, tractors, motorboats and airplanes, and is guaranteed to function perfectly for one year. King Bee Spark Plug Co., 1006 South Hill St., Los Angeles, is the California distributor.

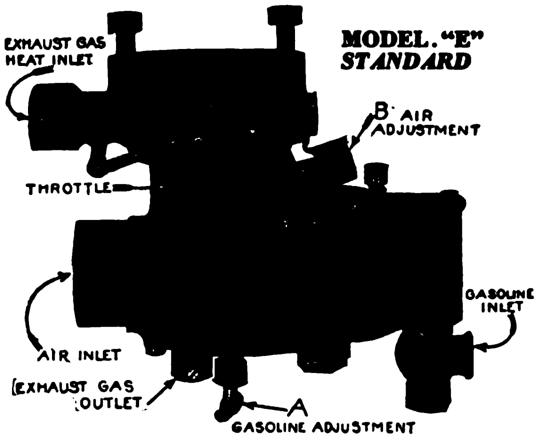


KING BEE SPARK PLUG.

SPARK-C TESTER.

In appearance Spark C, the new Westinghouse device for detecting dead or missing spark plugs, current leaks from wiring, etc., is very similar to a pencil. The point is laid on the plug metal or porcelain, or wiring, and a small slot in the instrument observed closely. A regular flashing in the slot indicates satisfactory ignition operation; a dim light, faulty plug or wiring; very bright light, spark gap too wide; very rapid flashing, a leak in high tension wires or distributor. It is made of high grade materials, proven under 250 hour tests in the laboratories of Westinghouse Lamp Co., New York City, and distributed by Harry W. Harrison, Inc., 848 South Flower St., Los Angeles.

At 20 miles an hour, a car covers nearly 30 feet per second or 150 feet in 5 seconds. And it takes a truck quite a bit longer to stop than a car.


EXHAUST GAS HEAT INLET
MODEL "E" STANDARD
B AIR ADJUSTMENT
THROTTLE
GASOLINE INLET
AIR INLET
EXHAUST GAS OUTLET
A GASOLINE ADJUSTMENT

MARVEL CARBURETORS

GIVE

Universal Satisfaction

POWERFUL— ECONOMICAL— SIMPLE—

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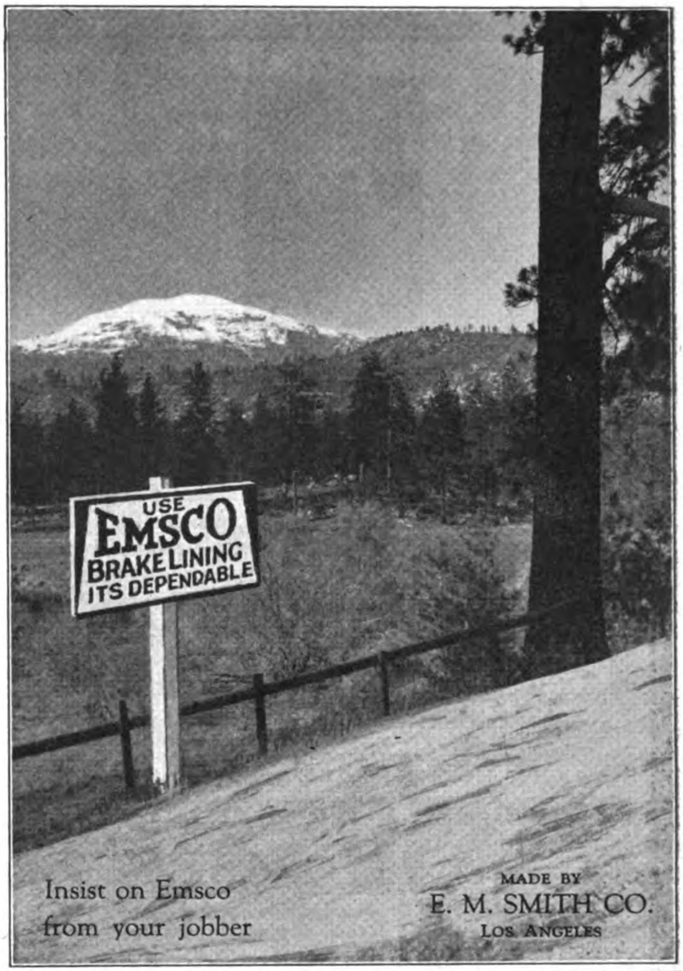
USE EMSCO BRAKE LINING ITS DEPENDABLE

Insist on Emsco from your jobber

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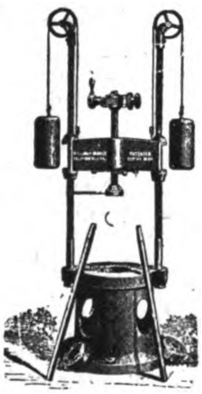
MONEY MAKING MACHINERY



Barnes Adjustable Screw Presses

3 sizes

20 to 50 Tons

THEY FIT ANY JOB

Just place the object in the press, drop the cross-head to the work and apply a few turns to the screw—that's all.

Distributed by

SMITH-BOOTH-USHER CO.

San Francisco
50-60 Fremont St.

Los Angeles
228 Central Ave.

DENBY

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REDUCED PRICES

Effective Jan. 1, 1922

	Was	Now
Model 31, ¾-1¼ ton Speedster	$1625	$1485
Model 33, 1½-2 ton	2300	2145
(Pneumatic tires used on above models)		
Model 34, 2 ton	2600	2395
Model 35, 2½-3 ton	....	2795
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Model 210, 5 ton	4850	4295
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F. O. B., Detroit, chassis with seat

With rock bottom truck and service prices, the Denby line offers a very desirable factory connection to live dealers.

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Denby Motor Truck Company
Detroit

Cletrac Model "F"

HERE'S the tractor that handles all usual tractor jobs from spring plowing to winter belt work and *cultivates all row crops besides.* Cletrac Model F together with Cletrac Model W, which sells to the larger farms and holds an enviable record in the industrial market, gives the dealer a *complete* line of crawler tractors and a double market to sell.

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Largest Producers of Crawler Tractors in the World
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Los Angeles—1029 South Grand Avenue
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Now $595 Complete F.O.B. Factory

Cletrac Two-Row or Straddle-Row Cultivator $135 F. O. B. Factory.

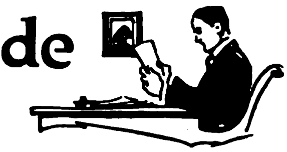
Use Motor West

¶ Every Eastern automobile or accessory manufacturer can help his Pacific Coast representative increase his sales by a liberal use of the advertising columns of MOTOR WEST.

¶ Coast dealers and factory representatives should insist on the factory folks giving them the same advertising support in "The Motoring Authority of the Pacific Coast" as is accorded the Eastern and Middle Western dealers and representatives in the motor trade journals published and circulating almost exclusively in those sections. Otherwise the dealers and representatives here, who pay their proportionate share of the expense of advertising in the Eastern and Middle Western journals (and incidentally receiving very little benefit from it) are paying for something they do not get.

THINK IT OVER!

Western Trade Notes



San Francisco, Cal.—J. P. Schiller Co., capital stock $250,000, has been formed to handle storage batteries by J. P. Schiller, former Coast manager for Luthy Battery Co., New York; G. Simmons Jr., Harold Haven, M. Torreyson, A. V. Husen.—Joseph Mulvihill Co., headed by Joseph Mulvihill, a San Francisco city supervisor, and Thomas Keough, has taken Pacific Coast distribution of Marathon oils, manufactured by Transcontinental Oil Co., Pittsburgh.—U. S. Auto Equipment Mfg. Co. has been formed with $250,000 capital stock by P. Farrini, Nino Carvello, and 16 other incorporators.—Don Lee, Inc., California distributor of Cadillac cars, has been incorporated for $1,500,000 by Don Lee, Annabelle T. Lee, and W. J. Gleason.

Oakland, Cal.—William Jost has bought the interest of his partner, Alfred C. Fowler, in Fowler Auto Electric Co., 4024 E. 14th St., and has changed the name to Jost Electric Service Co.

Colma, Cal.—George Rossi has opened his new garage on Mission Road, known as California Auto Repair Shop.

Stockton, Cal.—E. A. Test, Inc., has been incorporated here for $200,000 by E. A. Test, Zoe Test, Walter A. Test, to do a general automobile and tractor sales business.

Modesto, Cal.—Stanislaus County Auto Tradesmen's Association will hold an automobile show here September 9-16 in conjunction with the county industrial show.

Fresno, Cal.—E. B. Thompson of Norwalk Tire Co., 2325 Fresno St., Norwalk tire agency, has bought the interest of his partner, George F. Aughinburgh, and has changed the firm name to Thompson Tire Co.

Porterville, Cal.—Western Auto Supply Co. has leased a large store on Main St.—D. E. Brown has taken over Exide Agency from Harry Walsh.

Hanford, Cal.—Hanford Battery Co., opening in Walker Garage, in charge of Ben S. Jackson, has taken the Mac-Dry battery agency.

Fresno, Cal.—T. & H. Garage, 418 Fresno Ave., has been opened by K. Thomas, specializing on Dodge Brothers car repairing.—Hamilton & Murden will open a garage on a $25,000 building being erected on L. St.—De Luxe Trimming Co. has moved to new quarters, 635 Broadway.—Abbott & Kimball have opened with the Jordan and Velie car agencies on H St.

Oakdale, Cal.—Enos-Harrison Auto Electric Co., Willard service agency, has been opened by J. A. Enos and Ben Harrison on East Third Ave.—M. E. Crosby has opened Crosby's Garage in Rodden Bldg. on East Railroad Ave.

Manteca, Cal.—A. P. Goldberg and his son Chester have taken the Chevrolet agency, located on Yosemite Ave.—W. A. Greer has opened a Nash agency in the former building of Lucky McFall.

Modesto, Cal.—Charles C. Hale has been made Willys-Knight and Overland dealer here.

Stockton, Cal.—J. E. Clifford Battery Service has leased a $15,000 building to be erected on North San Joaquin St.

Riverbank, Cal.—Perrin & McMath have opened Riverbank Garage on Main St.

Bishop, Cal.—Watterson Bros. Garage will concentrate its shop work on Ford cars exclusively.

Gold Beach, Ore.—Trimble Garage is having an addition built which will double its floor space and give it an automobile accessory and supply department.

Myrtle Creek, Ore.—L. L. Roberts, forming L. L. Roberts Motor Co. has taken the Ford and Fordson agency for southern Douglas County.

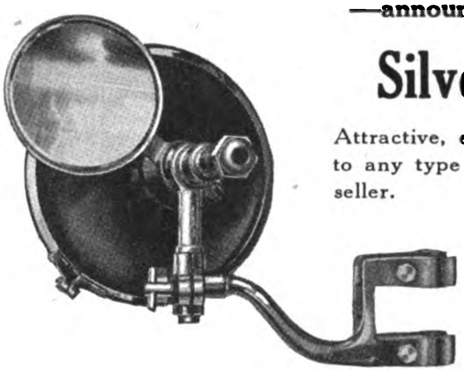
Novato, Cal.—Peoples & Roblar have been made Ford agents here.

Sierra City, Cal.—John Rose has opened Rose Garage in Williams Bldg.

Roseville, Cal.—N. H. Cochran has sold his half interest in Tire Surgery Station on Vernon St. to L. M. Osteen, his partner.—Tiffreau & Fruge of Roseville Garage have leased a cement block garage with 10,800 square feet being erected at Vernon and Atlantic Sts.—Placer County Auto Co. has sold its Willys-Knight and Overland agencies to E. H. Horton and W. H. Luck, retaining its Hydro-Toron tire agency.

Sacramento, Cal.—Barnes-McDonogh Motor Co., Inc., has been made Buick dealer here.—Sacramento Buick Co., capital stock $100,000, has been formed to handle Buick cars in Sacramento County.

Marysville, Cal.—Ed Whissler has bought the equipment of F. H. Johnson for $35,000 and has opened a Paige car and GMC truck agency.



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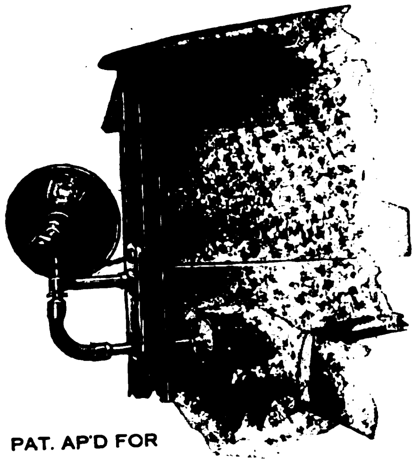

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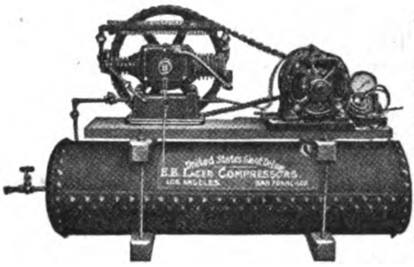

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Salient Six

IT'S A GREAT CAR!

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Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

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UNIVERSAL (R/D) TOW-BAR (one man)

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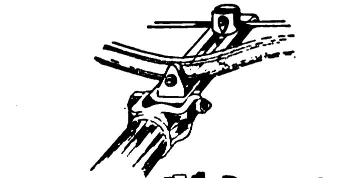

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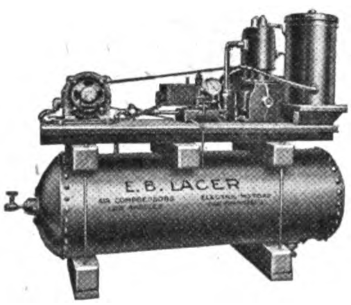

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If it is Compressed Air 1 to 80 cu. ft. of air per min.

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Air Compressors **Electric Motors**
Los Angeles **San Francisco, Cal.**
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A Permanent Job on Your Ford Car

Applicants are the ARG Auxiliary Spring and the ARG Fender Braces. They come highly recommended by thousands of Ford owners for whom they have cut down depreciation, added to riding comfort and prolonged the car's life.

The ARG Auxiliary Spring is a combination front spring protector and shock absorber, costing only $4.00. ARG Fender Braces, either front or rear, cost $2.50 and definitely end fenders cutting tires and rattling. Put these competent, reliable accessories to work on your commercial or passenger car *today!*

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BRAKE LINING FOR FORD CARS

SCANDINAVIA is woven from selected, long staple cotton on looms especially designed for FORD brake and transmission lining. Weighs 25 to 35 per cent more than other linings—which means more yarn, more body and more actual value.

Send for illustrated booklet and our Attractive Jobber or Dealer Proposition

SCANDINAVIA BELTING CO.
106-108 Reade St., New York City
Branches—Atlanta, Cleveland, Los Angeles, Portland, Boston, Chicago, Easton, Pa., Pittsburgh, San Francisco

Los Angeles, Cal.—Lord Motor Car Co., Velie and Jordan agency, has leased for its used car department a concrete building being erected at Olive and 12th Sts.—Romberger & Hettig Tire Shop, formerly at 6731 Hollywood Blvd., has moved to larger quarters, 6001 Sunset Blvd.—D. C. Winder has bought Golden State Garage, 2122 W. Pico St.—Automobile Tire Co. has opened a Hollywood branch, at 6028 Hollywood Blvd., E. M. Tileston manager.—Automobile Assembling Co., 1322 Produce St., has bought ground at 2101 E. 16th St. and will build a 1 story brick factory, to cost $20,000.—Perfection Tire Co. Inc. of California has been incorporated for $25,000 by Ed Mentz, H. J. Roberts, G. G. Bubeck, to act as direct factory branch for distribution of Perfection tires.

Huntington Park, Cal.—J. J. Tyrell has opened a Maxwell agency on East Clarenden St. and has made H. P. Bartlett Jr. sales manager.—Corner Garage has been bought by Gilbert Illo.

Long Beach, Cal.—E. A. Green, Franklin dealer, has started erection of a $50,000 one story concrete sales and service building, 6th and American Sts.

San Pedro, Cal.—San Pedro Chevrolet Agency has leased a new sales building being erected at 14th and Pacific Sts. and costing $25,000.

Lomita, Cal.—Oliver Rapier has opened Rapier's Battery Shop in Morris Garage on Narbonne Ave.

Butte, Mont.—Montana Motors Co., Oakland and Stephens car dealer, has moved to larger quarters, 224 E. Park St.

Great Falls, Mont.—E. B. Scott, E. Davis, J. Engstrom have been re-elected directors of the Montana Cord Tire Co., whose factory suspended operations last March; plans are now under way to resume manufacture of cord tires next fall.—Montana Auto Finance Corp. paid its stockholders 12½ per cent interest during the second year of its existence; Leonard G. Diehl has been re-elected president; Judge W. B. Rhoades, vice president; S. M. Weekes, secretary; Scott Leavitt, treasurer.

Kevin, Mont.—Jack MacGowan has opened MacGowan's Garage on Main St. here to supply storage and repair service to oil companies' trucks.

Cheney, Wash.—Ed Zay Garage and Machine Shop will occupy a new building with 4000 square feet being erected on First St.

Snohomish, Wash.—Snohomish Agency, Inc., is having a new garage with 1700 square feet floor space erected for it.

Vancouver, Wash.—Fred A. Shaw has opened Shaw's Garage on East 5th St.

Ilwaco, Wash.—Hawkins Auto Sales Co., headed by Arthur Hawkins, has opened with the Durant and Star car and Federal and Samson tire agencies.

Seattle, Wash.—Hartlaub & Bowen, 1430 10th Ave., have taken the Western Washington sales and service agency for Mayer carburetors for Fords.

Kelso, Wash.—Harry S. Weis has taken the Velie car for Cowlitz County.

Folsom, Cal.—Wall Brothers have opened a Willard service station here.

Sonora, Cal.—Francis & Damas have dissolved the partnership which has jointly operated Opera Hall Garage, owned by Francis, and Damas Machine Works, owned by Damas.

Marysville, Cal.—Guarantee Auto & Ignition Works have taken the Gill battery agency for Sutter and Yuba Counties.—D. & W. Specialty Co. has been formed here to manufacture bumpers and Ford timers.

Woodland, Cal.—Frank P. Leggitt has bought the interest of his partner, W. A. Bloodworth, in Leggit & Bloodworth Automobile Agency.

Santa Rosa, Cal.—Cassell's Garage will have a new building erected for it, 599x100 feet with stucco front on Fifth St.

Petaluma, Cal.—W. W. Tunstall and A. L. Bond have taken the agency for Polar bearing circulating water pumps for Fords.

Cloverdale, Cal.—Lampson & Roberts have opened an automobile supply store.

Jackson, Cal.—Howard Smith, Hudson and Essex dealer, has added the Samson truck.

Vallejo, Cal.—Kern Brothers, Marin and Capitol Sts., have secured the Marmon agency.—J. W. Sauer, Studebaker dealer, has moved to larger quarters on Florida Ave., occupying the former Dodge Agency Garage.

Niles, Cal.—Sydney Holman of Stebbins Garage has enlarged his quarters and added a battery department in charge of Frank Bruno.

Oakland, Cal.—United States Light & Heat Corp., Niagara Falls, N. Y., manufacturer of automobile storage batteries, has leased property and ground at East 14th St. and 54th Ave. for its Coast plant.—A. F. Hoffman and W. E. Hite, owners of American Auto Metal Works, have bought Lake Garage on Madison St. and will operate the two businesses separately.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

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PATENT APPLIED FOR.
RINGS
CONTROL the OIL QUALITY
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Largest Profit
All distributors for the genuine and original OIL KONTROL Piston Rings are appointed direct from the factory. Samples furnished jobbers and distributors
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SPRINGS

CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS
"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof
FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
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HIGH POWER PISTON RING
A LIFE SAVER FOR REPAIR MEN
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FORD VALVE ADJUSTERS

TOWNSAN VALVE ADJUSTER
Best little accessory ever put on a FORD
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WESTERN AUTO-SUPPLY COMPANY
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COMMISSION SALESMEN wanted for fast selling accessory for Ford cars, trucks, tractors. Box 337, New Holstein, Wisconsin.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

New Ford Projects.

Among Ford Motor Co. expansion undertakings is a $1,000,000 glass factory to be erected at Flat Rock, Mich., where all the windshields will be made. Flat Rock is 23 miles southwest of Detroit on Henry Ford's railroad, the D. T. & I. Sand is abundant there.

Another Ford departure is a cement factory, to be operated in conjunction with the River Rouge plant. Plans contemplate use of one-third of the many tons of slag turned out by the blast furnaces. Calcium or lime rock would have to be shipped in to compensate for the lack of sufficient lime in the slag, which, it is said, contains all the other necessary elements.

It is stated Henry Ford practically has closed a deal whereby he secured a 100 acre plant site in East Chicago, Ind. The price is said to have been $7000 an acre.

* * *

More Fisher Body Corp. Expansion.

The latest step in the vast expansion policy of Fisher Body Corp., Detroit, is erection of a large new factory building for the Shepard Art Metal Co., which is owned by Fisher Corp., making all of the exposed hardware fittings, interior and exterior, for automobile body construction.

The record of the Shepard Co. is typical of the growth of Fisher Body Corp. during the last few years. Three years ago the company was organized, and today it is said to be the largest of its kind in the United States, with a daily output of 30,000 pieces of equipment, which represents, it is stated, at least 75 per cent of the combined production of all manufacturers of automobile body hardware.

* * *

175,000th Hudson, 75,000th Essex.

Hudson Motor Car Co. and Essex Motors, during the week ending June 24, produced their 175,000th Hudson and 75,000th Essex.

It fell to the lot of Hudson Automobile Co., The Hague, export distributors for Holland, to be shipped the 175,000th Hudson. It was a 7 passenger phaeton, equipped with a kilometer speedometer instead of the usual mileage gauge. Several other features usually found on export cars were incorporated. The 75,000th Essex, a coach, was sent to a domestic distributor.

* * *

Alden Heads Engineers' Body.

H. W. Alden, vice president of Timken-Detroit Axle Co., was elected president of the Society of Automotive Engineers at its recent meeting at White Sulphur Springs, W. Va.

* * *

Figgie with Standard Steel Spring.

Harry Figgie, formerly in charge of sales for Perfection Spring Co., Cleveland, now is with Standard Steel Spring Co., Coraopolis, Pa., in a similar position.

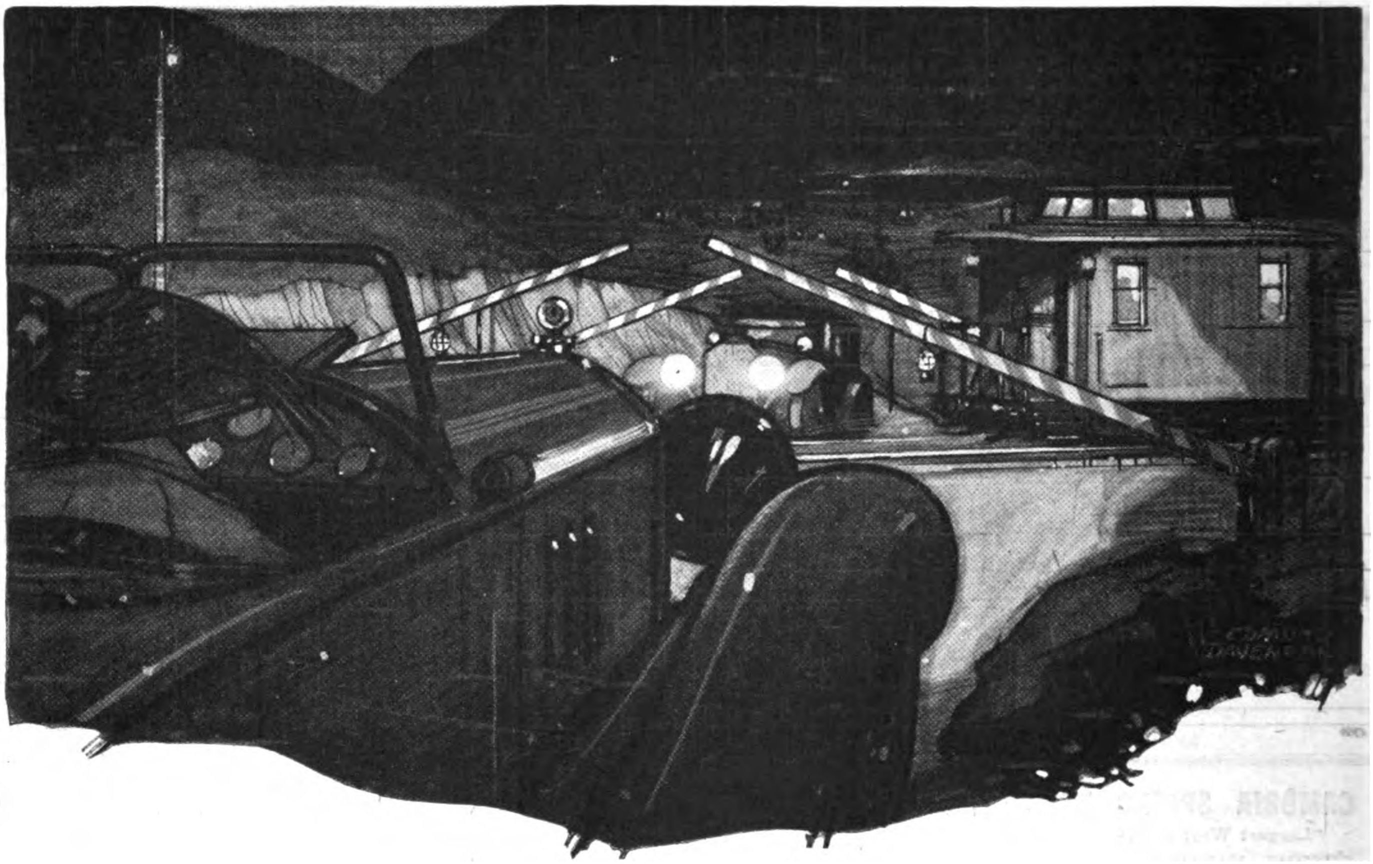
* * *

Maxwell Man Back from Australia.

W. T. Longwell, special representative of Maxwell Motor Co. in Australia, has reached Detroit after an absence of more thn two years.

* * *

It's everywhere—traffic congestion.



THE earnestness that goes into the building of Westinghouse Batteries—

The unusual guarantee that expresses the manufacturers' confidence in them—

The whole-hearted factory co-operation that is given Westinghouse distributors, service station operators and dealers—

These are some of the things which say to the alert battery man: "Join up with Westinghouse. Here is solid ground upon which to build a battery business—and hold it." We invite his inquiry.

WESTINGHOUSE UNION BATTERY COMPANY
SWISSVALE, PA.

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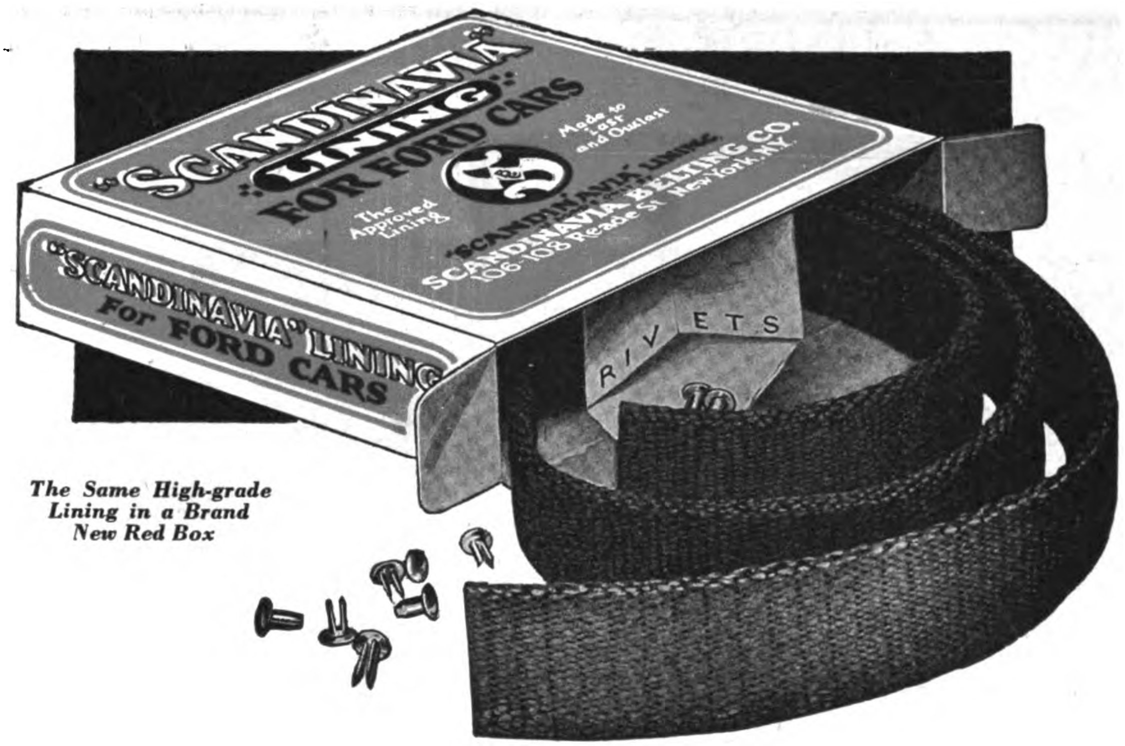
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LINING
FOR FORD CARS
The Approved Lining
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"SCANDINAVIA" LINING
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The Same High-grade Lining in a Brand New Red Box

Scandinavia Brake Lining is Made Especially for Ford Cars

SCANDINAVIA has become the accepted lining for FORDS, because it has proven itself to be a lining that will deliver 100% service during a long life of hard usage.

Woven from selected, long staple Southern cotton on looms especially designed for FORD brake and transmission lining. SCANDINAVIA weighs 25 to 35 per cent more than other linings—which means *more yarn, more body* and *more actual value*. Especially impregnated, processed and hardened (to resist heat, oil and grit and yet remain sufficiently pliable) to prevent chattering or glazing.

SCANDINAVIA is put up in convenient boxes with the necessary solid brass rivets for fastening to the bands. Cut into three equal-length pieces for Low and High Speed, Reverse and Brake Bands.

Write for Our New Folder "How to Change Ford Brake and Transmission Linings." We Have an Attractive Proposition for Jobbers and Dealers.

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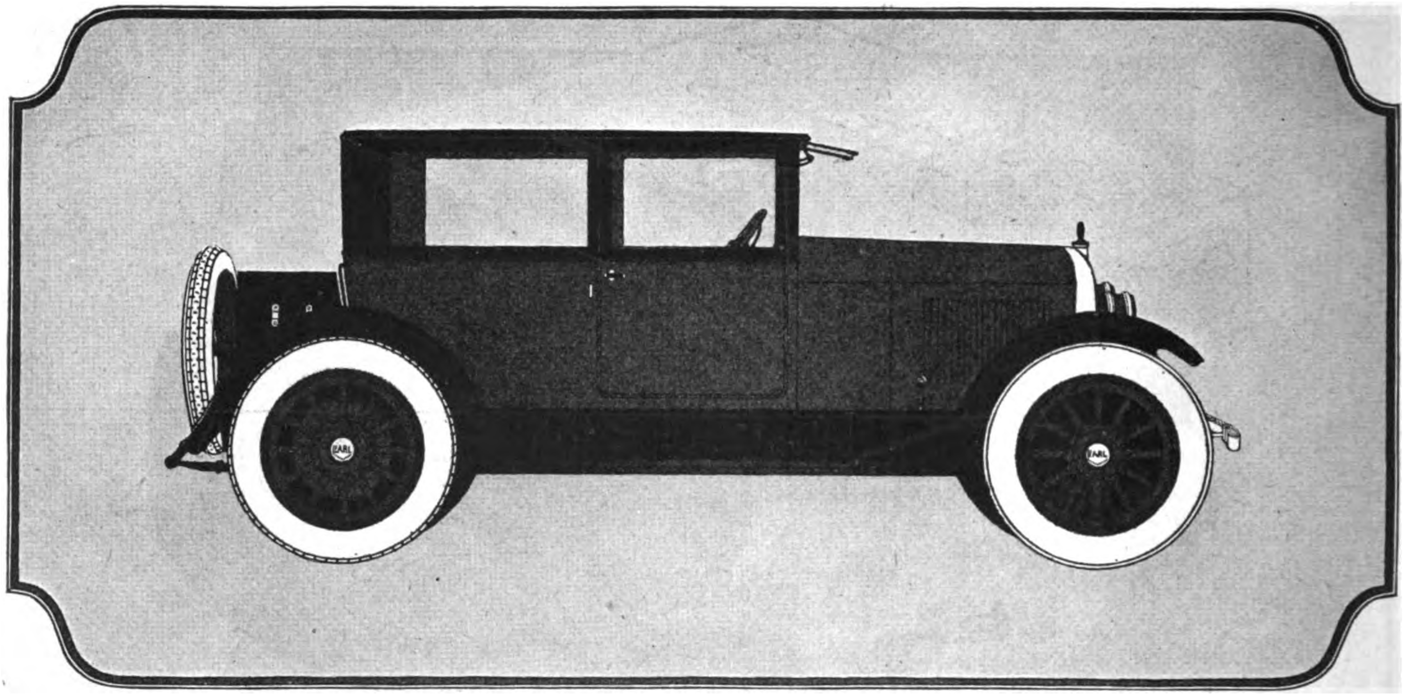
106-108 Reade St., New York, N. Y.

BRANCHES:

Atlanta	**Boston**	**Chicago**	**Cleveland**
Easton, Pa.	**Los Angeles**	**Pittsburgh**	**Portland, Ore.**



The EARL Cabriole at $1395

Unites dignity and charm with remarkable economy and comfort in a fine 4-passenger closed car

ALL the beauty, the friendly convenience and practical utility your prospects are looking for in an enclosed motor car, you can show them and sell them now in the new Earl Cabriole.

At $1395, its tangible value is so great that it is bound to outsell every other closed car in its price range. Thus far, it has been shown only at the factory, but already its success, measured by orders for immediate delivery, has been sensational.

Its character and uncrowded ease are suggested by the "comfort specifications" printed in an adjoining column. The distinction of its sweeping lines, the rich harmony of gray Spanish leather within and Earl blue and black without, must be seen to be appreciated.

The Cabriole is the right size—the right price—the right combination of good looks, economy, and ability to go anywhere a motor car can be driven. And it carries the right discount.

A great selling season for closed cars is just opening. And the Cabriole is the most astonishing closed car value ever offered. Write or wire for full information about this sensational new car and our contract terms. Some profitable dealer territories are still unassigned.

Comfort Specifications

Generous body dimensions, with a very low center of gravity and perfect balance, make for unusual riding qualities in the Earl Cabriole. Its over-all length is 14 feet, lacking one inch. Coupled with 56-inch rear springs, a rigid 7-inch channel frame with five cross members, and special spirals in tilted cushions, this roominess provides road comfort unsurpassed by cars of much greater first cost and operating expense.

Low sweeping lines give the Cabriole its special distinction. Its over-all height without passengers is only 74 inches. Head room is ample, however—from seats to top lining, 37 inches. The front tonneau is 53 inches long. The rear seat is 45 ½ inches wide, seating three without undue crowding.

The very wide plate glass door panels are lever-controlled, and can be raised or lowered without effort in the fraction of a minute. The one-piece, clear vision windshield swings inward or outward. Ventilation of the Cabriole, therefore, can be regulated to a nicety. The individual seats can be tipped forward at right angles, the backs folding flat. With the extra wide doors, this makes entrance and exit easy. The complete equipment includes sun visor, windshield wiper and dome light.

Touring Car	$1095
Cabriole	1395
Custom Roadster	1485
Brougham	1795
Sedan	1795

Prices f. o. b. Jackson

EARL MOTORS, INC.

JACKSON MICHIGAN

Full information about the Cabriole and four other striking Earl models on request. Wire or write to Jackson for the facts and our contract terms.

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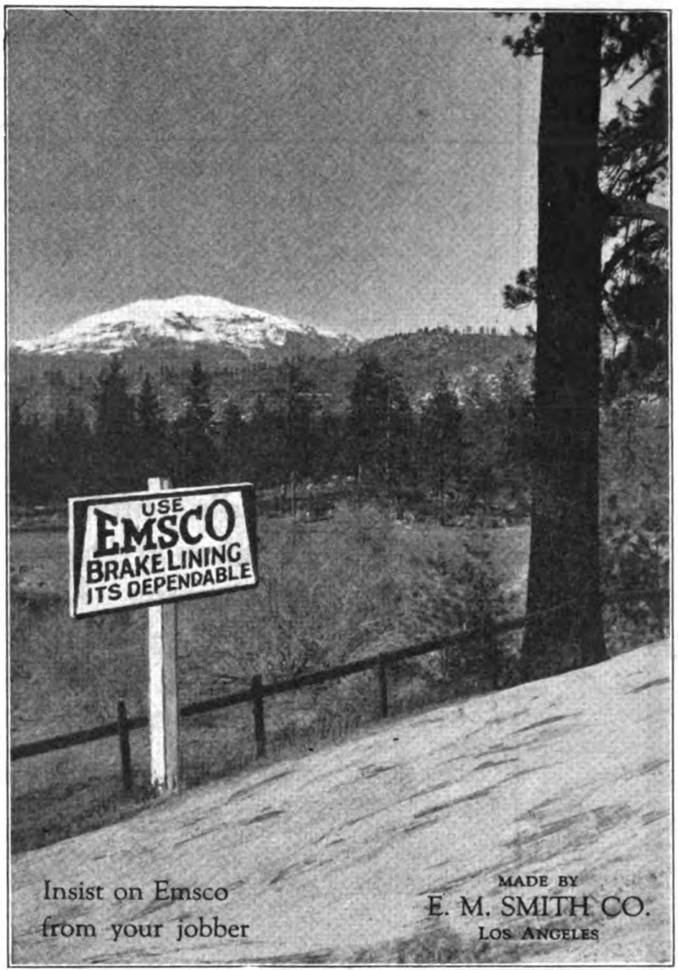
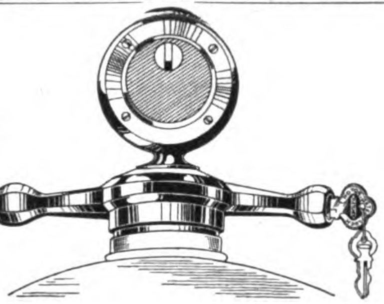



The only lock that protects your Motometer

Fletcher Motor-Meter Lock

$6.50 everywhere

Insert the Key—give a 1/4 turn and the Cap is as safe as a Bank Vault

Harry F. Joy & Co.,
1311 S. Figueroa St., Los Angeles
C. H. Diehl Specialty Co.,
612 Van Ness Ave., San Francisco
Alemite Lubricator Co.
10th & Oak Sts. Portland
312 E. Pike St. Seattle
1229 W. Sprague, Spokane

Distributors Fletcher Motor-Meter Locks

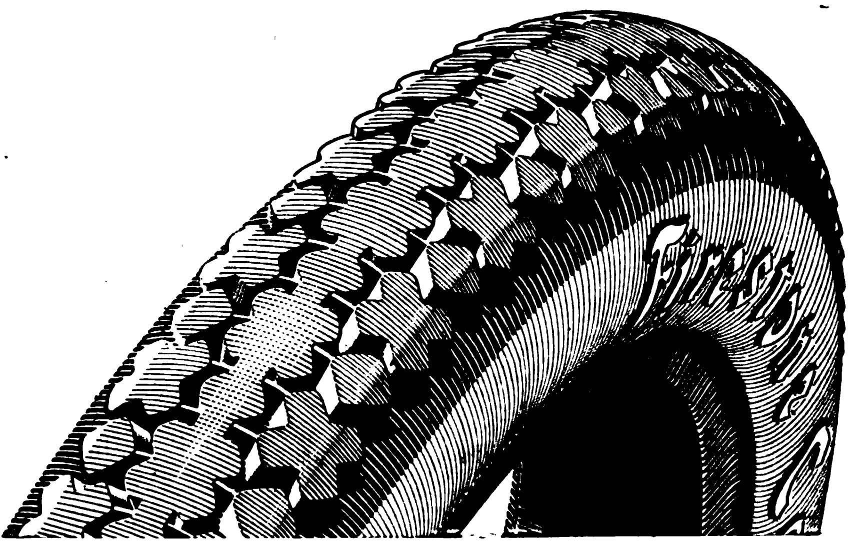
Bigger Sales

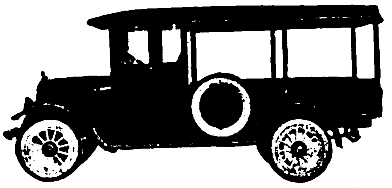
With Firestone mileage records exceeding any in tire history, Firestone dealers are naturally reaping a big and increasing harvest of sales, made easier by the low prices now effective and the new Firestone merchandising plan. Ask the Firestone salesman to explain the Firestone method of retail tire selling.

Most Miles per Dollar

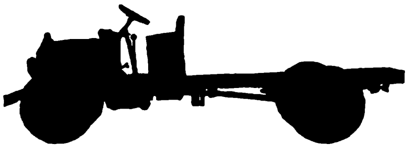
Firestone

GUM-DIPPED CORDS

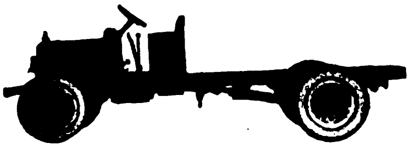




Model 15—2,000 Pounds Capacity
Rapid Transport, fast, 2,000-lb. (maximum) speed job, equipped with cord tires, electric lights and starter, seat, wind-shield, fenders and running boards, motometer, speedometer, bumper, extra rim, and carrier **$1295**



Model 25—3,000 Pounds Capacity
3,000-lb. (maximum), complete with electric lights, front fenders, bumper, radiator guards, hubodometer and motometer - - - **$1495**



Model 35—4,000 Pounds Capacity
4,000-lb. (maximum), equipped with radius rods, drive-shaft brake, four-speed transmission, electric lights, Duplex Engine Governor, front fenders, bumper, hubodometer and motometer - - - - - **$1885**

Sales Records Expand Transport's National Distribution

Transport's phenomenal sales records are bringing to Transport the largest and most successful motor truck distributors in the country. In the last few months leading distributors at the following points have taken on the Transport line: New York City; Brooklyn; Harrisburg, Pa.; Allentown, Pa.; Columbus, Ohio; Youngstown, Ohio; St. Louis, Mo.; Nashville, Tenn.; Tampa, Florida; Wichita, Kansas; Denver, Colorado. These are all big, broad-visioned distributors, who foresee the tremendous possibilities of the Transport line.

The growing list of Motor Trucking centers, which are becoming fertile Transport markets, is convincing proof of the recognition of Transport values by users everywhere. Transport performance, Transport fair prices, below the pre-war level, have an appeal to business men that means a lasting, profitable business for the Transport distributor. Transport's well-balanced program of national advertising is also a most important factor in developing Transport demand.

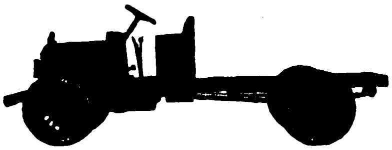
Transport Trucks combine units built by the world's leading specialists with Transport's own superior workmanship, the excellence of which is emphasized in every detail of construction. This combination is responsible for Transport's impressive performance history. Let us explain how Transport construction reduces friction and prolong's the truck's life—why Transports are called "Frictionless Trucks." May we submit details of our interesting dealer proposition?

TRANSPORT TRUCK COMPANY, Mount Pleasant, Michigan

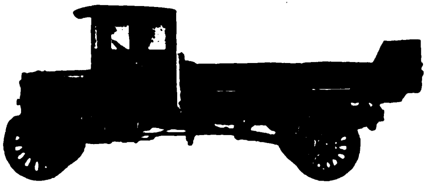
Northwest Transport Truck Co.,
510 Railroad Ave.,
Spokane, Wash.

D. F. Poyer & Son,
324 E. Sixth St.,
Los Angeles, Calif.

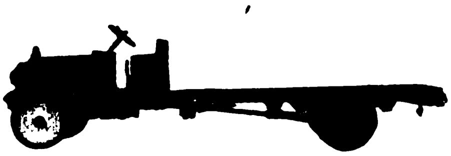
D. G. Westbrook,
364 Hayes St.,
San Francisco, Calif.



Model 55—6000 Pounds Capacity
6,000-lb. (maximum), same equipment as Model 35 - - - - - **$2385**



Model 60—7,000 Pounds Capacity
Contractor's Special, (Dump) 7,000 lb. (maximum) same equipment as model 35 - - - **$2585**



Model 75—10,000 Pounds Capacity
10,000-lb. (maximum) same equipment as Model 35 - - - - - - **$3485**

TRANSPORT

Transport is a Specialized Truck TRANSPORT TRUCKS *Every Unit Nationally Serviced*

Goodrich

announces new tire prices

—lowest cost mileage ever known

Effective July 20th, Goodrich established a revised price list that is a base line of tire value. It gives the motorist the buying advantage of knowing that whatever size tire he selects is of the same quality—*the Goodrich one-quality standard.*

It gives him the longest mileage, the most satisfactory service and the highest quality his money can buy. Results will prove that it is impossible to buy tire mileage at lower cost.

Think of being able to buy

Silvertown Cords

at such prices as these:

SIZE	BASE LINE PRICE	SIZE	BASE LINE PRICE
30 x 3½ Cl.	$13.50	34 x 4 S.B.	$30.85
31 x 3.85 "	15.95	32 x 4½ "	37.70
30 x 3½ S.B.	15.95	33 x 4½ "	38.55
32 x 3½ "	22.95	34 x 4½ "	39.50
31 x 4 "	26.45	35 x 4½ "	40.70
32 x 4 "	29.15	33 x 5 "	46.95
33 x 4 "	30.05	35 x 5 "	49.30

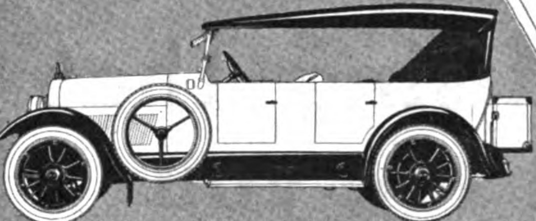
New base line prices are also effective on Goodrich Fabric Tires:

SIZE	BASE LINE PRICE	SIZE	BASE LINE PRICE
30 x 3 "55"	$ 9.65	32 x 4 S.B. (Safety)	$21.20
30 x 3½ "	10.65	33 x 4 "	22.35
32 x 3½ S. B. (Safety)	16.30	34 x 4 "	22.85

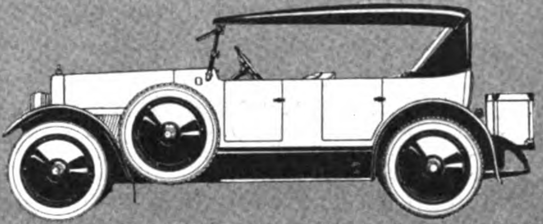
No extra charge for excise tax. This tax is paid by Goodrich

This revised price list affords the motorist as definite a guide to tire prices as Goodrich Tires are the definite standard of tire quality.

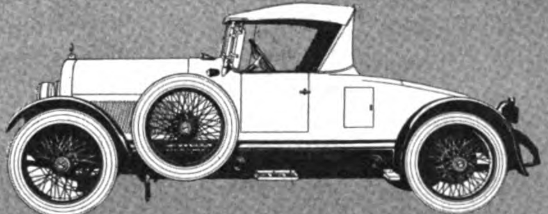
THE B. F. GOODRICH RUBBER COMPANY, *Akron, Ohio*



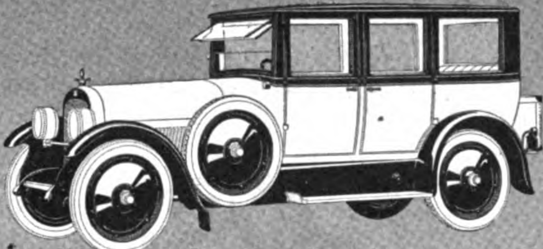
THE NEW, IMPROVED HAYNES 75 TOURING CAR, 7-PASSENGER, $2395



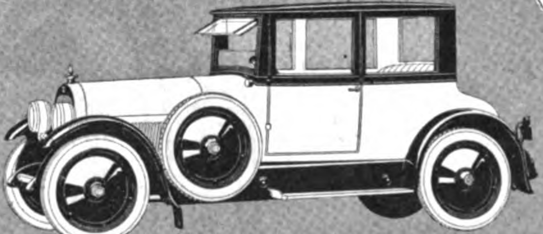
THE NEW, IMPROVED HAYNES 75 TOURISTER, 4-PASSENGER, $2395



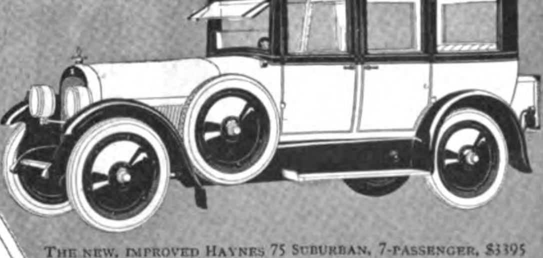
THE NEW, IMPROVED HAYNES 75 BLUE RIBBON SPEEDSTER, 2-PASSENGER, $2395



THE NEW, IMPROVED HAYNES 75 SEDAN, 7-PASSENGER, $3395



THE NEW, IMPROVED HAYNES 75 BROUGHAM, 5-PASSENGER, $3095



THE NEW, IMPROVED HAYNES 75 SUBURBAN, 7-PASSENGER, $3395
Movable partition separates driver's compartment from tonneau

A HAYNES 75 for every motoring travel requirement

Characteristic of the completeness which Haynes engineers and designers have exhibited in all their fine accomplishments, are these six superb cars of the "75" series. From the dependable Touring Car to the stately Suburban, each Haynes in the group bespeaks a thoughtful and intelligent attention to the many important details of design and appointment. The new, improved Haynes 75 bodies are mounted on a 132-inch wheel base.

HAYNES
CHARACTER CARS

$2395 to $3395

At FACTORY

The use of the famous Haynes-built 75 motor and the exclusive Haynes volatilizing system, in each type of Haynes 75 assures power, flexibility, speed, swift acceleration and economy. Demand for the Haynes in 1922 is exceeding any previous year. Haynes dealers reap the benefits. For the right man or selling organization, there are several rich territories open. Appointments will be made in confidence. Write, wire or telephone, addressing letters or wires to Dept. 849.

THE HAYNES AUTOMOBILE COMPANY
Factories and Offices: Kokomo, Ind., U. S. A.
EXPORT OFFICE: 1715 Broadway, New York City, U.S.A.

Cord tires and wooden wheels are standard equipment on all six-cylinder Haynes 75 models. The Haynes 75 Blue Ribbon Speedster has cord tires and six wire wheels as standard equipment **Disc wheels are optional at no extra charge.** *All models, excepting the Speedster, equipped with six wire wheels, price on application.*

© 1922, by T. H. A. Co.

Factory advertising that makes profit for you

FISK advertising appears in a wide but carefully selected list of the most effective sales-creating magazines in the United States, headed by *The Saturday Evening Post.*

Whatever the spending power of the different classes which compose the American motoring public, every one of these classes is reached powerfully and with a sales-compelling message in the most influential magazine going to that group.

The great farm population is blanketed by the Fisk advertising in National farm papers such as *Successful Farming, The Country Gentleman* and *Farm and Home.*

Class and sectional farm papers are used with prominent-sized copy, and the special divisions of the farm field are covered thru their most important papers.

In all of this advertising this year, we extend a frank invitation to tire-buyers to COMPARE Fisk with any other tires.

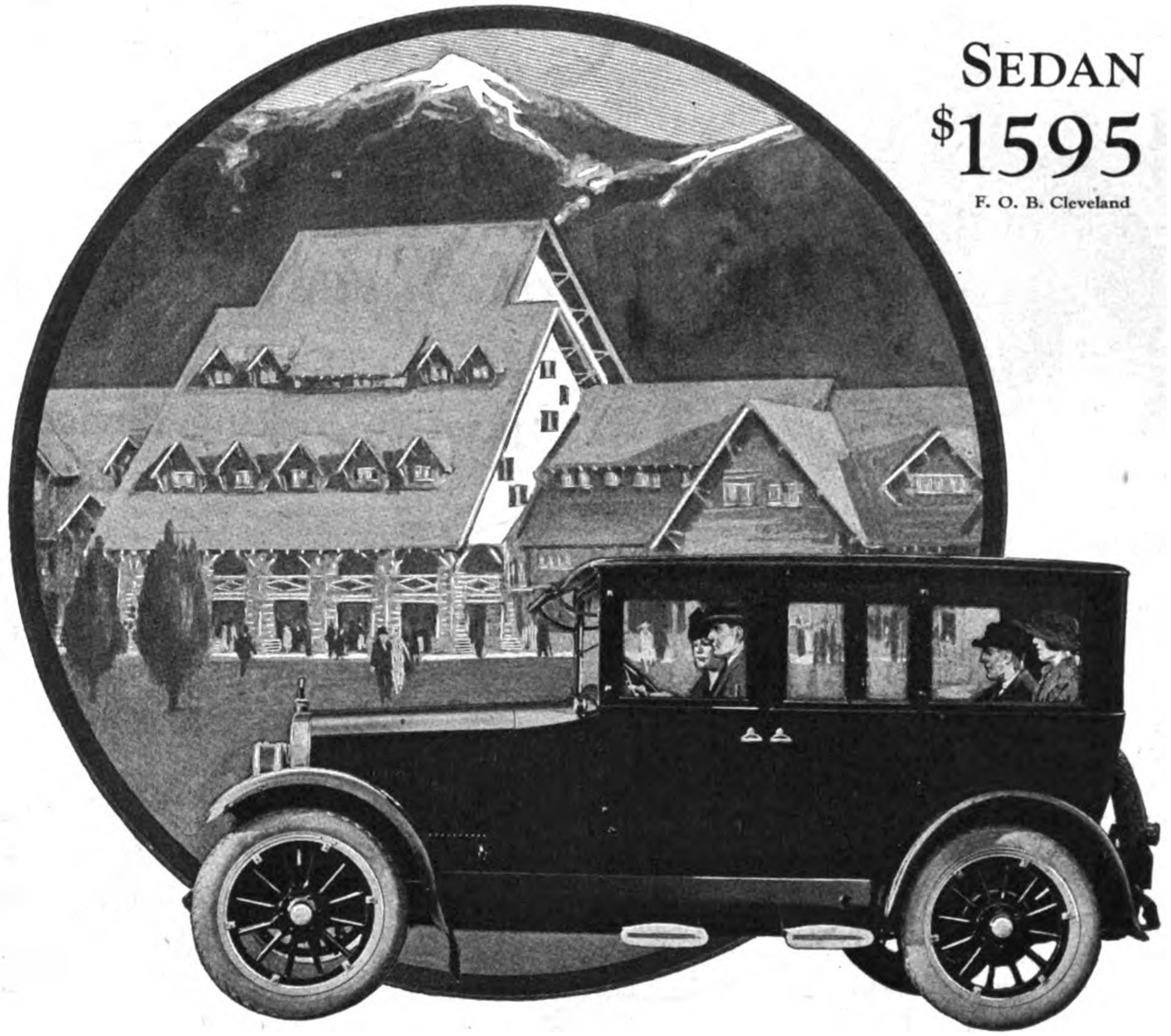
This year our unit tire sales are far in excess of the same period a year ago. The volume of our advertising is larger, and the sales message it carries multiplies its value to the dealer.

You must make a profit. With Fisk Tires and Fisk cooperation, your profit is *sure.*

There's a Fisk Tire of extra value in every size for car, truck or speed wagon

Time to Re-tire
(Buy Fisk)
Trade Mark Reg.
U. S. Pat. Off.
FISK
TIRES

THE WONDER CAR OF THE YEAR



SEDAN
$1595
F. O. B. Cleveland

Today's Best Buy In Closed Cars

No other Six cylinder sedan with Fisher-built body is priced so low as this new Cleveland Six.

Yet the fact remains that its new style and advanced chassis design have made it the choice of thousands of owners to whom its remarkably low cost was a secondary consideration.

Touring Car $1195 Roadster $1175 Coupe $1550 All Prices F. O. B. Cleveland

CLEVELAND AUTOMOBILE COMPANY · CLEVELAND
Export Dept: 1819 Broadway, New York City
Cable Address: "Cleveauto"

CLEVELAND SIX

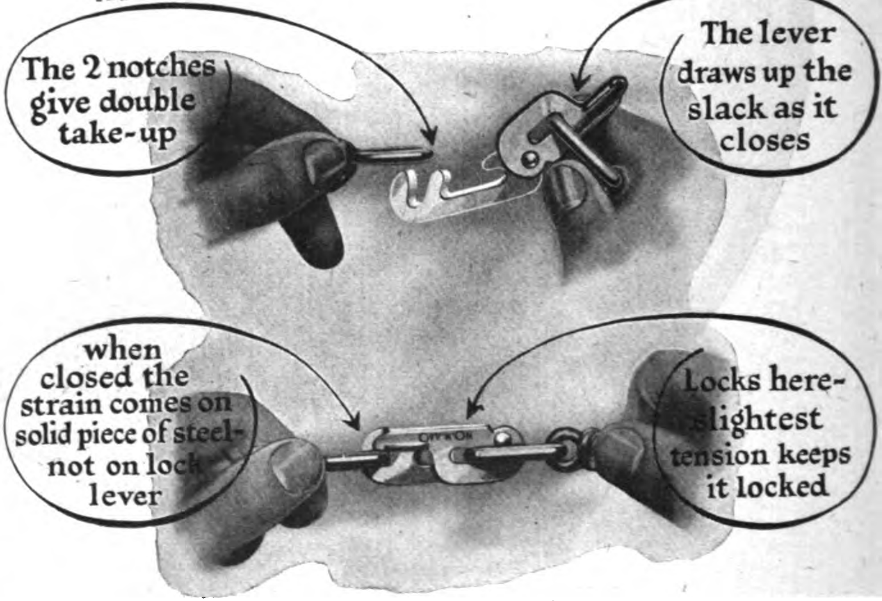
OFF'N'ON CHAINS

make it easy to be safe!

No lost chains with the positive locking device

This is the patented OFF'N'ON lock—simple and positive. The first or second link on the opposite end of the side chain is slipped into the notch—the clamp permitted to drop—and the chain ends are positively locked. A slight pressure of the thumb under the clamp end, immediately releases the lock. For less "take-up" than a link, the second notch in the lock can be used.

This OFF'N'ON lock is more than merely a fastener; it's a *tightener!* Its lever action not only assures a positive locking together of the ends of the chain—it quickly and easily *pulls them together and tightens the chain to the exact true fit* for the casing.


The 2 notches give double take-up
The lever draws up the slack as it closes
when closed the strain comes on solid piece of steel-not on lock lever
Locks here-slightest tension keeps it locked
OFF'N'ON

This patented slip-on link makes it easy to take off worn-out cross chains and put on new ones. A child can do it. OFF'N'ON Chains, with these special devices, cost no more.

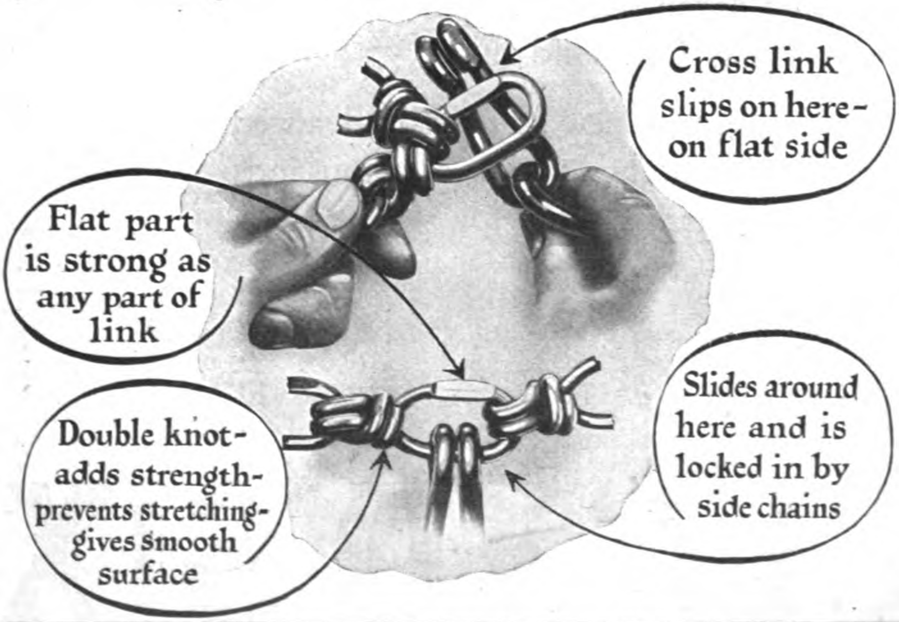
These are some of the special patented features of OFF'N'ON Chains that make them rapid sellers. Order from your jobber today. Buy extra cross links, you can sell a set with each pair of chains.

Write for circular and price list giving the name of your jobber

PYRENE MANUFACTURING COMPANY
Makers of Pyrene Fire Extinguishers
520 Belmont Ave., Newark, N. J.

BRANCHES:

CHICAGO 17 So. Jefferson Street	KANSAS CITY 1712 Grand Avenue
ATLANTA 24 Nassau Street	SAN FRANCISCO 977 Mission Street


Cross link slips on here-on flat side
Flat part is strong as any part of link
Double knot-adds strength-prevents stretching-gives smooth surface
Slides around here and is locked in by side chains

REO

Ride With the Leader

Some distributors and dealers always have been content to take the other fellow's dust.

Not on the road—but in business.

Keep on the lookout, and you may see a chance to secure a seat with the pacemaker.

Occasionally—tho not often—changes become necessary even in this organization.

Here and there, one proves unequal to the speed or the high standard, to which those who hold the Reo franchise must conform.

It's costly business selling a competitor of Reo, either in the passenger car or truck field.

Especially the latter—for the superiority of that Mighty Speed Wagon is one subject on which the world is unanimous.

A letter to the Sales Department will put you in line for a place in the van.

Reo Motor Car Company, Lansing, Michigan

Los Angeles Branch, Cor. Hope & 12th Sts. San Francisco Branch, 1730 Van Ness Ave.

Take a Tip from Blakeslee!

CONCENTRATE on the famous, advertised lines—stock just one in each class—build your *timer* business on the *Milwaukee.* That's how Blakeslee developed a $40,000 accessory business within three years, in Pontiac, Mich.

BLAKESLEE'S AUTO ACCESSORIES
BLAKESLEE'S
AUTO
ACCESSORIES

George Blakeslee won't compete with himself. He handles just one line of tires, one of bumpers, one of spark plugs, one timer (the *Milwaukee*) and so on, picking the leader in each class.

He wants quick turnovers, with little money tied up in stock. That's the way to beat the accessory game! He started with $600 three years ago. His 1920 sales were $40,840.34!

Apply Blakeslee methods to *your* business. Quit the slow-selling "unknowns". Play the winners! Display them; push them. *How's your stock of Milwaukee Timers?*

Writes Blakeslee:

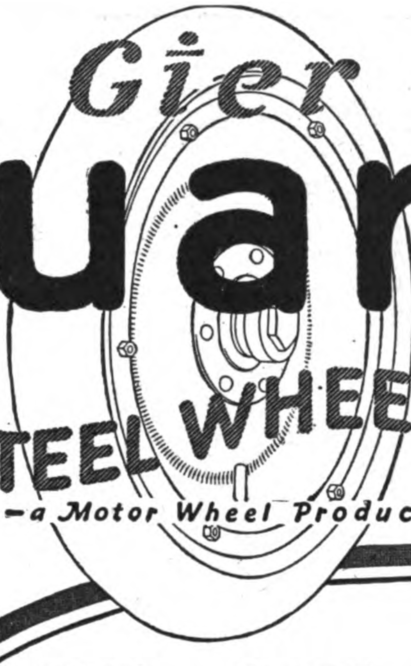
"Replying to your very much appreciated letter of the 25th inst., would say you can just bet Milwaukee Timers are on the shelf and in our show case also, and the only thing we have 'agin 'em' is that 'they sell' and then we are put to trouble of troubling Bowman of Detroit for more."

Steel Display Stand for you FREE, postpaid, on request.

MILWAUKEE MOTOR PRODUCTS, INC.
MILWAUKEE, WISCONSIN

MILWAUKEE TIMER *for* FORDS

Sells *Fast* at $2.00



Gier
Tuarc
STEEL WHEELS
—a Motor Wheel Product

Wheels That Sell Better *Now*

The demountable rims of Tuarc Wheels take much of the distaste out of tire changing on hot summer days. Gier Tuarc Steel Wheels always *stay on* the axle, which eliminates heavy lifting. There is no risk of dirt in the hubs; no chance of dangerous misalignment.

Spare tires are carried on the regular rim-carrier without changes—the tourist can pack two or three spares with no fear of excessive weight. There are only four wheels to buy, an immediate economy. Tuarcs fit the hubs of any particular car, eliminating installation delay and expense.

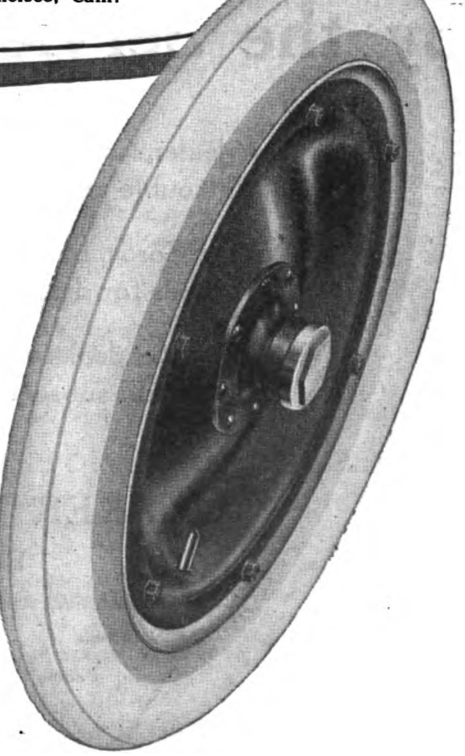
First with direct outside standard wood wheel valve stems; first with the handsome two-arc design, Tuarc Wheels are everywhere recognized for matchless convenience, beauty and strength. Inquire now about your territory.

MOTOR WHEEL CORPORATION, LANSING, MICHIGAN

Motor Vehicle Wheels Complete—Metal Stampings—Steel Products

MOTORS, EQUIPMENT & TRACTOR CO.
1341 So. Hope St.
Los Angeles, Calif.

WILL E. WALLACE
520 Van Ness Avenue
San Francisco, Calif.



Motor Wheel
PRODUCTS

QUAKER CORDS
THE
BUSINESS BUILDERS
OF 1922

QUAKER CORD

T.T.T. (Non Skid)
Reg. U.S. Pat. Off.

Western Dealers know Quaker Cords by the Service they give Car-Owners

The dealer, as well as the user, wants tires which will give the minimum trouble and at the same time, the mileage that is expected.

Quaker Cords, by the unmatched service they are rendering, are making friends for dealers everywhere.

Progressive dealers who are determined to build up a big business this year and subsequent years should get our proposition at once.

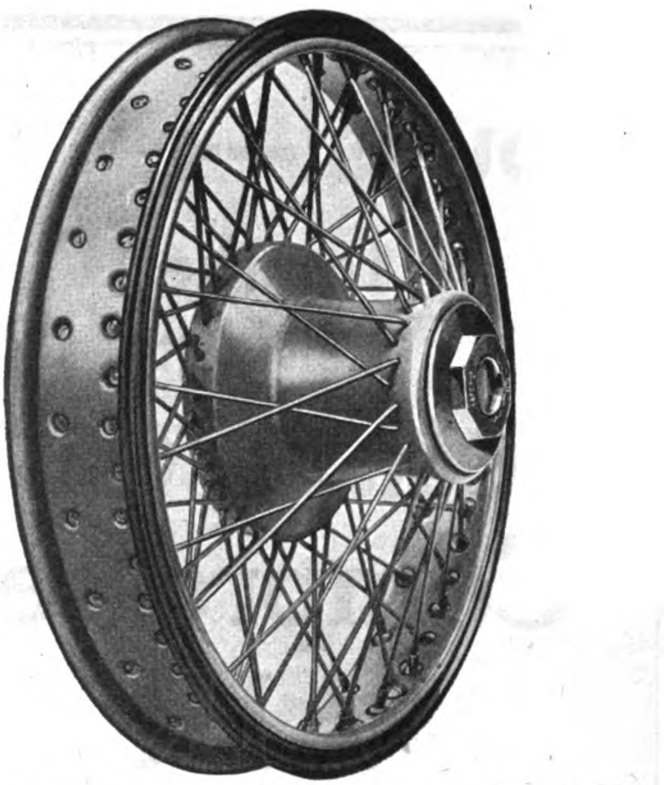
QUAKER CITY RUBBER COMPANY

FACTORIES—PHILADELPHIA

Manufacturers, Automobile Tires and Tubes, Mechanical Rubber Goods

Philadelphia	Chicago	Pittsburgh	New York
624-26-28 Market St.	217-221 W. Huron St.	30 E. Lacock St., N. S.	53 Murray St.

Pacific Coast Office, 304 Williams Building, San Francisco



WIRE WHEELS

and what they will ADD to your car

The overwhelming percentage of high-grade cars now being sold with Wire Wheels as regular equipment indicates that buyers of the Nation's finest cars appreciate:

—that Wire Wheels add to the snappiness and distinctiveness of a smart car;

—that Wire Wheels add to the easy-riding qualities of the car and to the comfort of the passengers;

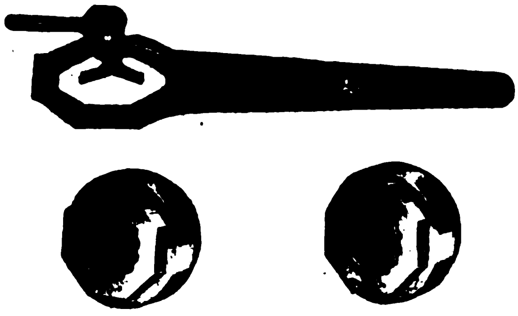
—that, by reason of their quick change feature, Wire Wheels add to the pleasure of motoring;

—that, due to the extra strength of the triple spoke construction, Wire Wheels add greatly to the passengers' safety;

—that Wire Wheels add materially to the life of tires.

WIRE WHEEL CORPORATION OF AMERICA
1700 Elmwood Ave., Buffalo, N. Y.

Direct Factory Branches and Service Stations:
New York—835 11th Ave. at 57th St.
Chicago—2900 So. Michigan Ave.
Philadelphia—328 North Broad St.
Detroit—433 Leland Street
Los Angeles—1216 S. Grand Ave.
San Francisco—1690 Pine St.



The new POSITIVE LOCKING Hub Cap feature of Wire Wheels

The illustration shows wrench with cam lever by which locking barrel of this type of Wire Wheel is disengaged.

This newest feature of Wire Wheels not only prevents wear, but it provides positive protection against loosening of wheels.

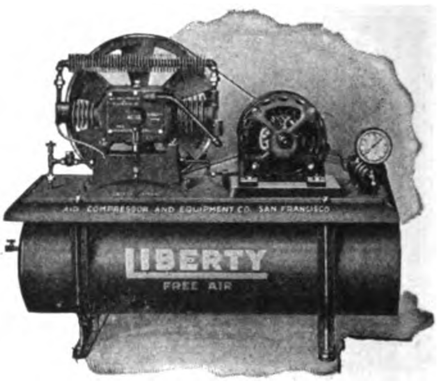
five wheels, triple spoke, detachable at hub

yours!---
for the asking:
A Catalog On Compressed AIR

COMPRESSED AIR
LIBERTY
FOR SHOP - GARAGE
AIR SPRAYING
AIR COMPRESSOR - EQUIPMENT CO.

Tells You All About the Liberty---Every Model and Every Size for Every Need!

Get the complete story of LIBERTY AIR COMPRESSORS in a way that will "tell you something" about high grade compressors, how to use them, and what size to use for specific purposes. This catalog gives details of all sizes of Libertys we manufacture and of all accessories for painting, car cleaning, tire filling, and the many other compressed air needs. It is sent to you, on your request, absolutely gratis—and no "follow-up" by a salesman unless so requested by you.


AIR COMPRESSOR AND EQUIPMENT CO. SAN FRANCISCO
LIBERTY
FREE AIR

The above photograph illustrates one of the popular small size Libertys we manufacture and keep in stock for immediate shipment to any point in the world.

Liberty Air Compressors are sold on a deferred payment contract, or a discount of 5% is allowed for cash.

Practically noiseless operation, and all parts interchangeable.

The catalog is FREE and tells you all about it, so WRITE for it NOW — while you're thinking about it!

Ask the Jobber nearest you for details about the Liberty Air Compressor.

AIR COMPRESSOR AND EQUIPMENT COMPANY

46-50 NATOMA STREET, SAN FRANCISCO, CALIF.
504 SO. SAN PEDRO STREET, LOS ANGELES, CALIF.
1433 CARROLL AVENUE, CHICAGO, ILL.

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 9 AUGUST 1, 1922 $3.00 PER YEAR

A HUGE FACTOR IN OREGON'S WELFARE

Business of $85,600,000 a Year Done on $56,882,678 Automotive Capital By More Men Than on Railways.

The significance of the following Oregon figures is strengthened by stating they do not cover large companies distributing gasoline and oil; oil and service stations; stage and bus lines; for-hire cars; private garages and fleet service stations; dealer and garage-owned service and utility cars and trucks; nor the value of highways, highway employes or road work of any kind.

Even excluding all of these, the enterprises composing the automotive industry in Oregon have a capital investment of $56,882,678.80, and do an annual business of $85,600,000. They employ an annual average of 5858 persons—more than are employed by railways—and their collective payroll averages $118,615.50 a week or $11,490,239.50 a year.

These and other vitally interesting facts are in a report by Ralph J. Staehli, secretary of the Automobile Dealers' Association of Portland; the result of several months of investigation, including a questionnaire sent to all automobile, accessory, garage, tire, service station and equipment men, wholesale and retail, in the state. It is the most exhaustive and accurate study of the industry in Oregon ever made.

In making comparison with railway transportation it would be fair to include the highway system—the motor vehicle's "tracks," paid for by motor vehicle license and gasoline tax money. Doing this would add $100,000,000 to the capital investment, huge sums to the yearly expenditure and volume of business, and a very large number to the total number of workers.

It was not possible to state accurately the number of persons per year carried by motor vehicles in the state, but it is estimated at 500 to 900 per cent more than are carried by railways, including interurban lines; and it is estimated that 4,500,000 tons of freight per annum are moved by motor trucks.

Of the total automotive investment stated, $39,344,308.50, about 71 per cent, is in land and holdings. Equipment totals $4,079,774.57; stocks aggregate $13,458,595.83.

The city of Portland represents about 60 per cent of the industry, taking the figures all in all.

For every dollar's worth of motor vehicles in the state, another dollar is invested in the business, to back up the investment in motor vehicles and keep them in operation.

Increased value of real estate and other property, and profitable economy in all lines of activity, made possible by motor vehicles, compared with previous means of transportation, would be an "item" expressible in many millions of dollars.

Trade Visitors on Coast.

Among July visitors on the Pacific Coast have been the following prominent automobile trade men: J. T. Spicer, general sales manager of Thermoid Rubber Co., Trenton, N. J.; Charles McNamee, vice president of General Motors Corp., Detroit; Barney Oldfield, president of Oldfield Tire Co., Akron, O.; F. W. Weinheimer, Banner Accessory Mfg. Co., St. Louis, Mo.; C. W. Dickerson, Timken-Detroit Axle Co., Detroit; Vance Shearer, Blublaze Motor Specialties Co., New York City; C. M. Ahlene, sales engineer of Borg & Beck Co., Chicago; Frank Kip, of Frank Kip, Inc., Chicago; J. J. Cole, Jr., Cole Motor Car Co., Indianapolis.

Sold 100 Gardners in 100 Days.

One hundred Gardner motor cars in as many days was the sales record made until July 1 of this year by Mitchell, Lewis & Staver Co., Gardner distributors in the Northwest.

A COURT UPHOLDS GARAGEMAN'S LIEN

Decision Is that Accumulated Charges and Final Possession if Not Settled for Are Warranted By Law.

That a garageman does not lose his lien if a car on which he has made repairs is taken from his shop before repair costs are paid, was the important superior court decision made recently in Los Angeles County. This decision, rendered so far in only one case, but which it is believed the state supreme court will affirm, means that a repairer need not retain possession of a car upon which work is done, till that particular job is settled for, but may let successive charges accumulate, and in the end retain or obtain possession until the account is settled in full.

Wurl's Garage, Pomona, did $350 worth of repair work on a Ford truck which F. T. Bailey was buying from California Finance Co., Los Angeles, on payments. Bailey defaulted payments, and the brokers replevined the truck. Wurl's Garage was represented by Allan G. Mitchell, regular attorney for Citrus Belt Automobile Trade Association, and the court allowed Wurl's claims for payment of repair bills or possession of the vehicle. The court decided that subdivision 2 of the state's civil code was applicable. It reads:

"A person who makes, alters or repairs any article of personal property at the request of the owner, or legal possessor of the property, has a lien on same for his reasonable charges for the balance due on such work and materials furnished, and may retain possession of same until charges are paid."

Salient Six in Butte.

Ahrens & Ahrens, Inc., Spokane district distributors for the Stephens Salient Six, has closed a contract with the Butte Velie Sales Co., Butte, Mont., for 100 cars. The Butte concern will take shipment on a schedule contract.

REPORT MADE BY FEDERAL RESERVE

Twelfth District Conditions Growing Better Constantly, Unemployment Is Scarce, Outlook Excellent.

The following summary of business and agricultural conditions in the Twelfth Federal Reserve District, released by Federal Reserve Bank of San Francisco July 27, covers June comprehensively and up to July 15 on certain lines.

Indications of increasing business activity in this district, which first appeared during April and May, multiplied during June. Prices of the principal products have either remained firm or advanced slightly, reflecting similar tendencies in national prices. The United States Bureau of Labor's wholesale price index, which increased 3½ per cent in May, advanced 1.35 per cent in June and is now 8.7 per cent above the low point of January, 1922.

Charges to individual accounts of depositors in banks of the 20 principal cities were 5.6 per cent greater in amount than in June, 1921.

Sales of 32 representative department stores for the second consecutive month were greater in dollar value than in the same month of 1921, the increase of June, 1922, over June, 1921, being 3 per cent. As average retail prices have changed but little during this period, the physical volume of merchandising now moving at retail is evidently increasing.

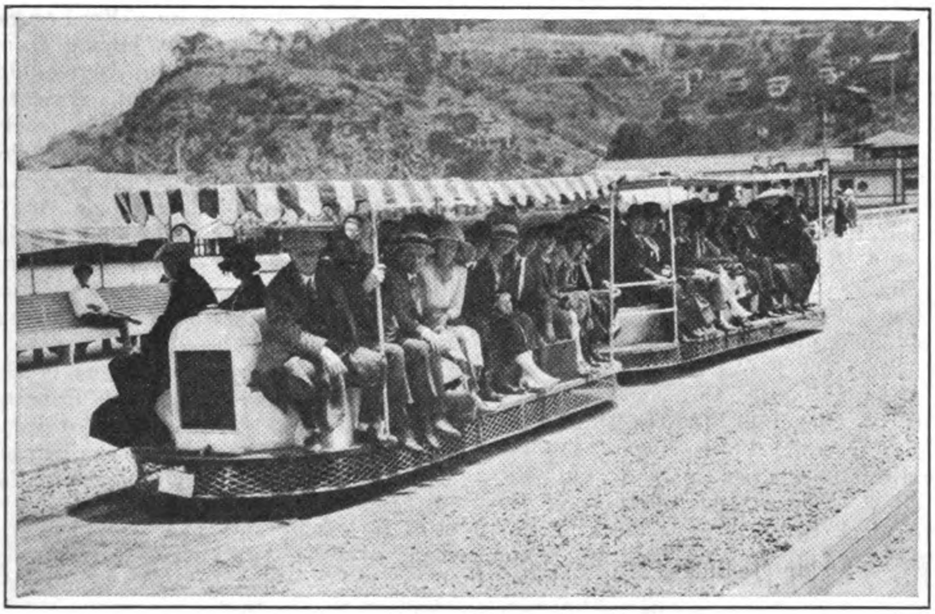
At wholesale, also, the same condition prevails. Of the ten reporting lines of trade, nine advise that the dollar values of their sales for June, 1922, exceeded those of June, 1921.

Employment has increased throughout the district so generally that involuntary unemployment practically has disappeared. A wage increase in the lumber industry of approximately 10 per cent occurred during the month. It is the first increase since the business recession began in 1920.

With the exception of San Francisco, the principal manufacturing cities of the district report steady increases in the number of men employed each month, and a substantial increase of manufacturing activity as compared with June, 1921. An unfavorable aspect of the business situation is the increasing number of business failures reported.

Productive activity also continues to increase. Lumber and log production during June exceeded that of the previous months of the year, and were 50 per cent and 20 per cent, respectively, in excess of output in June, 1921. Of the 17 copper mines of the district, eight are now operating, compared with two a year ago, and their May output of 23,613,000 pounds of copper was nearly 1,000,000 pounds larger than in April.

Petroleum production in June was less than 1 per cent smaller than the record output of the preceding month and stocks of crude oil continued to increase to 43,500,000 barrels, and on June 30 were 46 per cent in excess of stocks held a year ago. On July 15 a reduction of approximately 25 cents per barrel in crude oil prices was announced, the first change since the reduction of 25 cents per barrel in August, 1921.



AUTOMOBILE JAUNTING CARS ARE USED ON CATALINA, THE "MAGIC ISLE."

It was on a chartered steamer, and they were playing African golf, and one of 'em lost $1500 on the trip from Los Angeles to Catalina, and he didn't bat an eye. Let's see—it must have taken about an hour and a half; so that's about how long it takes to reach the "Magic Isle," and when you arrive, for 5 cents you can ride on a jaunting car from the pier to Hotel St. Catherine, for 5 cents. The front car shown in the picture has a tractor engine. Note also the spotlight. The seats are deep-cushioned. The cars are a neat white, with brightly colored ownings. They make the grade around Sugar Loaf very satisfactorily. Other automotive equipment on the island is the motor bus service to various points. One may not take his own motor to it, and doesn't want to.

Gasoline stocks on May 31 had declined 14.3 per cent during the month, and were 18.7 per cent less than on May 31, 1921.

Building activity during June was exceeded only during April.

The grain crops of the district have suffered on account of unusually dry weather during June, and the total wheat yield is now estimated at 103,211,000 bushels compared with a final yield of 122,000,000 bushels during 1921. The hot weather has been unfavorable also to the growth of forage crops and pastures in the livestock areas, but the condition of the stock in most sections is still reported good.

However, warm weather, which damaged the grain crops and pastures was beneficial for ripening fruit. The yields of peaches and pears generally, and of the other commercial fruits in California, will be almost without exception larger than last year. Shipments of green fruits to Eastern markets are proceeding normally. Fruit canners in California are planning a 1922 pack which will be about 15 to 20 per cent larger than the pack of 8,500,000 cases in 1921, with opening prices, announced early in July, slightly higher than the prices quoted for that pack.

Notwithstanding the increasing activity of production and business, bank credit generally continues to be abundant and cheaper. Prevailing interest rates charged by banks in the larger centers are 5½ to 6 per cent, and in the agricultural regions decreased slightly during June. Effective July 8, the rediscount rate of this bank was reduced from 4½ to 4 per cent for all classes of paper. A temporary increase in borrowings by the city banks from the reserve bank, attending the closing of the fiscal year on June 30, was almost canceled by July 12, total rediscounts of this bank on that date being $42,000,000 compared with a total of $40,000,000 on June 14. Despite the increase in agricultural activity at this season throughout the district, repayments by country banks of their rediscounts with the Reserve Bank in general continued to exceed their new borrowings.

The price for ferrying automobiles between San Francisco and Oakland has been reduced by the Southern Pacific from $1.18 to $1.06 per car.

WATSONVILLE WILL HAVE A REAL SHOW

Large Attendance From Four Counties and Widely Representative Exhibits Promise Fine Results.

The way preliminaries are being handled, as to the motor car and accessory show to be held in the civic auditorium in Watsonville, Calif., August 12-16, indicates it will draw a large attendance from four counties. A special map has been printed, showing it as the hub of a district reached from Santa Cruz, San Jose, Morgan Hill and Gilroy by radial lines from the north, Hollister from the east, and Monterey and Salinas from the south. Manager James S. Martin writes:

"The show is going big. We are working out a very elaborate and beautiful decorative scheme. Accessories space is practically all sold, and 75 per cent of it has been taken by national organizations. The motor car distributors are arranging to have factory experts here with chassis and cutaway models on display, and the accessory department will be filled with moving exhibits.

"A large amount of publicity is being given this show by the San Francisco papers and all of the papers of the four counties. In fact, there is not a city or hamlet throughout this immediate territory that has not been thoroughly billed for this show. We are also giving away a Ford coupe with the admission tickets. This car is equipped with Hayes wire wheels, Perfecto 2 speed axle, Hassler shock absorbers, Buckeye bumpers, Stewart speedometer, Simplex Ford radiator shell, extra tire, Coast tires, sun visor, etc.; also enough Crown gasoline and Zerolene to run 1000 miles.

For Spokane's Largest Show.

The largest automobile show ever held in Spokane is scheduled for the week of Spokane Interstate Fair, September 4-9. Arrangements have been completed by Art Shea, in charge of the fair grounds automobile building, for the display of about 23 lines of passenger cars in more than 15,000 square feet of floor space, in the building, and additional room in a special tent adjoining. The tent annex was made necessary by the unexpectedly strong demand for exhibits from 15 of the city's largest automobile distributors.

King County Body Election.

At the recent annual meeting of the King County Automotive Trades Association, at the Motor Club, Robert S. Taylor was elected president, and William A. Simonds re-elected secretary-treasurer. Mr. Taylor is one of Seattle's foremost automotive designers, and a member of the Society of Automotive Engineers. He succeeds Kenneth McAlpin as president.

Walter W. Biddick, Inc.

Seven months ago Walter W. Biddick, former field secretary of California Automobile Trade Association, established himself as a representative of automotive supply manufacturers, and since has become active distributor for many lines. He has appointed sub-distributors in many sections of the country, and one in England.

Rapidly increasing business has made it necessary to lease larger quarters, at 1316 South Grand Ave., Los Angeles, occupied August 1. The concern has been incorporated as Walter W. Biddick, Inc., and will have offices in San Francisco and Fresno. Salesmen now work out of the Los Angeles office, covering all of California. Associated with Mr. Biddick are Leland R. Crawford, M. F. Sanders, Robert J. Goodwin, M. V. Biddick, William J. Biddick and James E. Granger.

THE INDUSTRIAL SITUATION.

The general industrial situation has improved until unemployment during June was comparatively small. The iron and steel industry has been operating at above 75 per cent of normal, but this has meant practically full employment for available labor. Reports from Southern iron centers have told of the recruiting of negro labor by agents from the North. The cement industry has been going full speed, sustained by much highway building, and the latter of itself has called for a large supply of labor. House-building has kept the building and building material trades well employed. The lumber industry on the Pacific Coast is above normal, and the Southern Association's report is about normal. In Detroit the labor situation in the last three months has approached conditions at the height of the boom. The output of automobiles and trucks in May made it the banner month for the industry. It is interesting to note that the great bulk of the automobile business is in the cheap and moderate-priced cars. Cars selling at $3000 and upwards will not aggregate more than 3 per cent of the total.—National City Bank of New York.

Even Firemen Must Not Speed.

The assistant fire chief of Eureka, Calif., was arrested recently by the traffic officer, who said: "Rules is rules."

Coming Races.

Cotati Speedway, near Santa Rosa, Calif., will have its latest race meet of the season on August 6, when there will be 50 mile and 100 mile events for the cracks, and a 50 mile event for dealers.

Uniontown, Pa., September 6, Labor Day, will be the next attraction for the speed merchants. September 16, the new Kansas City track will be opened. Then back to Fresno, September 30.

Not more than 12 cars will be allowed to race on the Fresno speedway, September 30. This number will be decided by disqualifying all who cannot make 100 miles an hour, and then picking the fastest 12 out of the remainder. Signed entry blanks are already on hand from Ralph De Palma, Jimmy Murphy, Peter De Paolo, Harry Hartz, and one for a Durant entry.

On July 25 Irl Robinson, for Greater San Francisco Speedway Association, wrote: "Reconstruction on the San Carlos has not begun. The insurance has not been paid, as the adjuster has been very busy with other claims, and until the adjustment is made rebuilding will not be definitely considered. We expect to know in a few days."

The track was partially destroyed by fire, June 19.

Martin-Parry Well Represented.

Martin-Parry Corp., Indianapolis, manufacturer of wooden and metal motor vehicle bodies, added five branches recently—four of them in the Far West. They are at Omaha, Denver, Salt Lake City, San Francisco, and Los Angeles, and are practically assembly plants, meeting the needs of both users and dealers for commercial bodies.

A trip to the East by C. P. Henderson, Pacific Coast manager for Martin-Parry Corp., and Elliott Higgins, formerly of the Commercial Body Co. of Seattle, has resulted in consolidation of their Eastern interests with those formerly controlled by Commercial Body Co.

The territory surrounding Seattle, Portland and Spokane is to benefit soon by the established standards and policies Martin-Parry has maintained so successfully in the East. As a result, a chain of service extending from coast to coast and from north to south is now offered to chassis dealers, and in linking this with the standard of product, the original hope of paralleling the commercial chassis industry is said to be about realized.

For desert trips in summer, a clean system and drinking little are advisable.

OREGON DOES WELL IN REGISTRATIONS

Apparent Gain 24,670 or 29 Per Cent in Motor Vehicles in 13 Months to July 1—Portland Leads.

Motor vehicles in Oregon increased 29 per cent in the 13 months ending July 1. This is shown by comparing July 1, 1922, figures, announced by the secretary of state, with unofficial statistics given out as of June 1, 1921. Registrations this year stood at 109,001 on July 1, compared with 84,311 on June 1 last year. Motor truck registrations are not given separately, but they are estimated at above 15,000. The state received $2,973,378 in license fees, although collection of these began with the first of the present year.

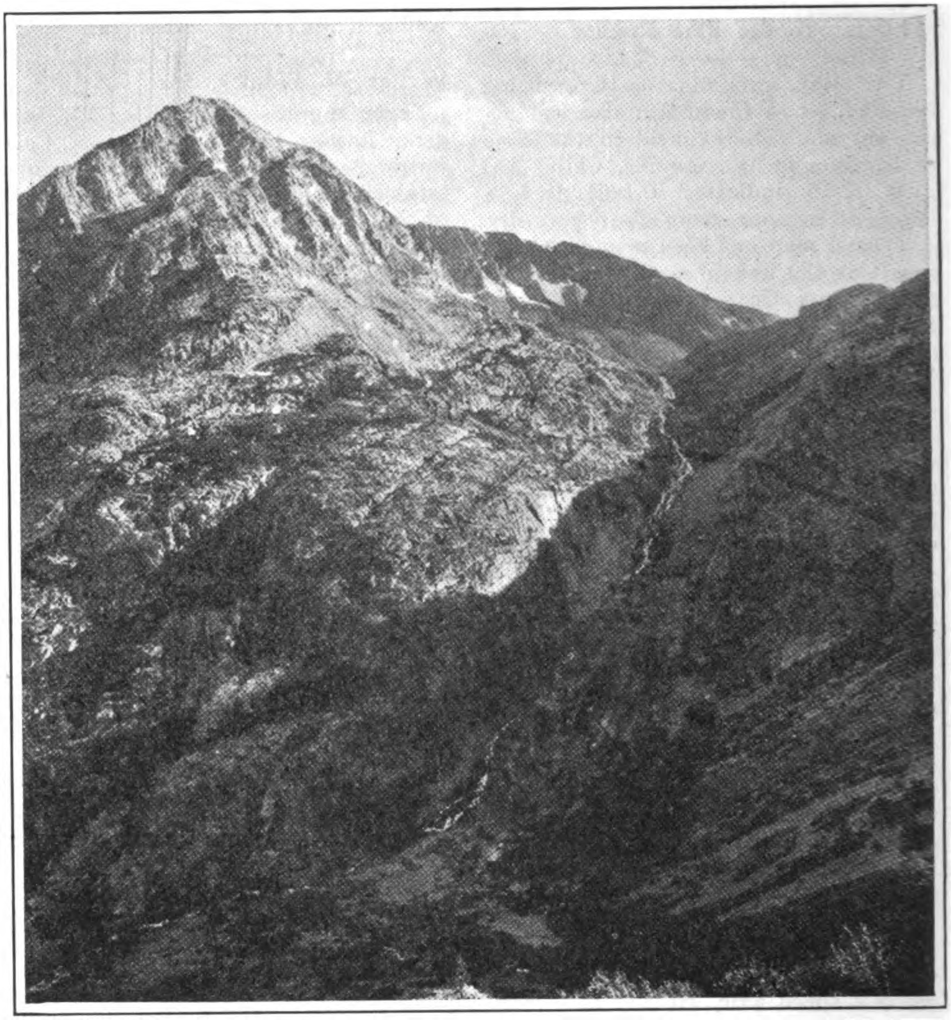
There are 484 motor vehicle dealers in the state.

Multnomah County, containing Portland, has 35 per cent of the total registrations, or 38,442, and shows no sign of losing its lead. The following table shows the number of motor vehicles, and motor vehicle dealers licensed in each one of the state's 36 counties:

Counties	Motor Vehicles	Dealers
Baker	1452	14
Benton	2194	7
Clackamas	5064	18
Clatsop	2337	12
Columbia	1376	7
Coos	2110	15
Crook	479	3
Curry	332	2
Deschutes	1611	8
Douglas	2871	15
Gilliam	553	5
Grant	477	4
Harney	436	2
Hood River	1491	11
Jackson	4230	22
Jefferson	399	..
Josephine	1393	10
Klamath	1569	10
Lake	528	2
Lane	5485	19
Lincoln	224	2
Linn	3843	18
Malheur	1051	6
Marion	7769	33
Morrow	715	5
Multnomah	38,442	133
Polk	2201	6
Sherman	735	5
Tillamook	1387	5
Umatilla	4203	26
Union	1970	8
Wallowa	692	6
Wasco	2027	11
Washington	3966	16
Wheeler	264	2
Yamhill	3125	15

Thousands at the Beaches.

Probably at least 200,000 motor cars or about one of each five registered, meaning at least 600,000 humans, on the Pacific Coast went either to the beaches or, inland, to the lakes and mountains last Sunday. The masses of cars at the seashore, these days, are remarkable. Even the beaches where there are no "attractions," and where on the other hand overnight camping is not permitted, swarm. A very large proportion of visitors to these arrive early on Sunday, put up tents, get into one-piece suits and make a day of it. The "resort" towns have no monopoly now.



PLEADING FOR LEE VINING FALLS, NEARLY THE WORLD'S HIGHEST.

Some time ago Motor West printed, as news, a plea submitted in behalf of farmers and lovers of scenery, against destroying Lee Vining Falls, 1950 feet high, said to be the world's highest except those in Yosemite, and a valuable scenic asset to California, on the Tioga Road. By that road more and more motorists from points east go to Yosemite. It saves more than 100 miles of detour. Motor West also printed the reply of the power company charged with illegal intent to destroy the falls. It was not a satisfactory reply.

The company is charged by the grand jury of Mono County, Calif., with obtaining Government grants deceptively. The jury asked the U. S. Attorney General to investigate—with no result.

One of the hardest individual fighters against destroying the falls is Walter D. McPherson, public spirited owner of 1400-acre Paoha Island, in Mono Lake—said to be nature's most wonderful mirror, not excepting Crater Lake in Oregon. Mr. McPherson sent Motor West the picture of Lee Vining Falls printed above. The ruining of these falls is said to have been begun already, without legal right on account of the strongly alleged deception in respect to the real reason (said to be a desire to obtain and sell power) behind an "irrigation" plan. The secretary of National Parks Association, Washington, D. C., has the grand jury's charges and has been asked to see the Attorney General, but those who value great scenic assets and have sympathy for farmers whose irrigation needs are threatened dangerously, are being urgd to influence their representatives in Congress.

Eastern California is a rich asset to the state, and it needs its scenery. Pickwick Stages, N. D. Inc., has asked the railroad commission for permit to run a stage line between Los Angeles and Coleville, Mono County, on the Nevada line, as part of a proposed route to Reno. At Mono Lake, at the spot where Mark Twain got inspiration for many of his writings and where the curative waters of the lake impelled his story about curing the mangy dog, Mono Inn has been established and will be open the year round. A camp ground will be operated with it. The lake frontage, about a mile, is covered with groves of trees, grass and alfalfa and has many fresh and mineral springs. There is a great view of the lake's beautiful colorings, and of the marvelous evening afterglow of the mountains. Trout fishing is near.

To all of this, what impends for Lee Vining Falls, west of Mono Lake, is related. Who wins—the power company or the people?

LOS ANGELES SHOW TO HAVE A "SCOOP"

First Exposition in Two Years to Be in November, Beating New York and Chicago as to 1923 Models.

It was definitely determined, at the last regular meeting of the Motor Car Dealers' Association of Los Angeles, to hold its tenth annual automobile show late this year, it is announced by Burt Roberts, executive secretary, who in addition to his regular duties will be general manager of the show. A number of prominent distributors are on the committee to handle details and select the dates. It is practically certain that November will be the month, Mr. Roberts says. The show committee appointed by President Paul G. Hoffman is as follows: Harry A. Lord, of Lord Motor Car Co., chairman; James C. McGill, of McGill Motor Co.; George W. Franklin, of Lynn C. Buxton, Inc.; Byron C. Foy, of Reo Motor Car Co. of California; and F. G. Whipple, of Service Truck Sales Co. Preparations already are under way.

As this show will be the first important one of the season 1922-23, it is expected to attract attendance of national scope. It will give manufacturers opportunity to place their latest factory offerings strongly before the public's attention. Many factories already have made changes in body and chassis design and style this year, and under ordinary circumstances the new models would not have a real public showing until after the first of the year, at the New York and Chicago national shows.

There also will be many 1923 models announced in the weeks immediately preceding the Coast show, and these are expected to be displayed in Los Angeles. When the definite period is known, manufacturers will be notified in ample time.

The last automobile show in Los Angeles, held in December, 1920, brought scores of prominent automobile factory men from the large Eastern centers, and many 1921 models for their first showing. The large attendance throughout the 8 day period proved that automobile shows have not lost one particle of their power to interest the general public, and to act as stimulants to increased automobile and accessory sales.

Buick Pioneers Over Tioga.

The distinction of being the first automobile to traverse the snow-laden altitudes of Tioga Pass and enter Yosemite National Park through its eastern doorway to date in 1922 is claimed for a 5 passenger Buick, driven by "Outdoor" Franklin, sent out by Howard Automobile Co., Los Angeles, to repeat his similar feat of last year. The mountain route was atacked from the Owens River Valley side June 24, and Camp Curry in Yosemite was reached July 2. West of Rhinedollar Lake, Franklin and John Kerner fought their way through a score or more of snowdrifts 20 feet and more deep. On Tioga Pass summit they found it 45 feet deep, but by using heavy planks got the car through successfully, except in one drift where it sunk out of sight, and compelled the two men to shovel snow for three dys to unbury the car and prepare the road ahead. Having in mind other Buick performances in the Yosemite region, it is now claimed that this was the first car this year into the Park over the Wawona route, over Tioga Pass, and first to Glacier Point above the Valley.

Records Fall on Palomar.

Palomar Mountain, altitude 5800 feet, in the "back country" of San Diego, ascended by a road 12½ miles long, badly cut up and with steep grades, recently was the scene of record-breaking rivalry between three well known makes of cars. A Lexington set a mark of 31 minutes, 59 seconds, some time ago; then on June 29 a Wills Sainte Claire car, driven by H. F. Morgan of Wills Sainte Claire Co., San Diego, reached the summit in 31 minutes, 15 seconds. Shortly after came a Nash, sent out by W. Edward Shaw, San Diego dealer, which shaded the second record by ¾ second. The Wills Sainte Claire returned July 6 and climbed the mountain in 29 minutes, 59⅖ seconds. According to Mr. Morgan, this car had covered 10,381 miles between San Diego and the Los Angeles vicinity before its Palomar performances. A short time ago it pulled a 20 passenger automobile stage over Torrey Pines grade, through congested traffic that compelled five stops.

Powers Mfg. Co. Head on Coast.

L. J. Powers, head of Powers Manufacturing Co., Waterloo, Ia., was a recent visitor on the Coast, where he conferred with Marcus Co., Inc., Los Angeles, wholesale distributor for the Norwegian transmission lining for Ford cars manufactured by his company.

Cross crossing cautiously.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

Lexington's Cascade Stunt.

To cross the Cascade Mountains, in Oregon, south of Mount Hood, always has been a real journey in all seasons of the year, from the time of the lumbering ox teams and swaying wagons of the '40s and '50s down to the present, in sections where the road or trail, more or less vaguely defined, runs through forest that for miles is strictly primeval. However, a Lexington car recently made the run from Portland across the range to Wapinitia, and returned by Columbia River Highway, a round trip of 240 miles in 12 hours. It was driven by W. C. Reed of Oregon Lexington Co., Portland, accompanied by his wife and little daughter, and two newspaper men. In 43 miles of the most difficult mountain driving the trail led up and down creek bottoms, where giant boulders pounded the bottom of the car, up long second-gear grades, across swamps where several times the Lexington crew had to be their own bridge repairers, and through immense stands of pine and fir trees which throw the road into twilight gloom.

The run, says Mr. Reed, was intended to stop at Government Camp, to get information on the resorts on the south side of Mount Hood, but the joking, half-veiled dare of a hotel manager there decided him and his passengers that to continue would be an excellent chance to test the car's qualities in hard mountain driving.

San Diegans' Economy Run.

At least 30 cars are expected to be entered for the San Diego-El Centro automobile economy run, August 8. It will be under the auspices of the San Diego Automobile Dealers' Association. With A.A.A. rules, it will be strictly an economy run. Cars will be divided into classes according to the San Diego price: $800 and under; $800 to $1500; and $1500 to $2500 and over. Quantity of gasoline, oil and water consumed by each car will be announced, and the ton mileage will decide the cup awards. Twelve hours are allotted for the run over the mountains and across Imperial Valley to El Centro and return.

Two New San Diego Agencies.

Two new agencies in San Diego are for the Stutz and for the Stanley steamer. Distribution of the Stutz in San Diego County has been taken by W. Edward Shaw, Columbia and B Sts., who retains his agency for the Nash car in the same field. The Stanley agency is also for the county, and is held by Stanley Steam Car Co. of San Diego, with new quarters at 1132-34 First St.

IT PAYS TO MAKE TRUCKS ON COAST

Moreland's 10 Year Record Such that Original Shares Sold at $100 Have a Valuation of $518 Now.

Moreland Motor Truck Co., Burbank, Calif., reports that the sudden upward jump in sales occurring early this year is holding up at a most gratifying rate, and that its production departments are making every effort to meet the volume of orders. More than 400 persons are now employed in the company's fine plant and the June payroll exceeded $45,000. In June, complete trucks were rolled off the assembly line at the rate of one every 2 hours, 40 minutes.

To provide more working capital for expanded production and an enlarged distributing organization throughout the Far West, a new issue of $1,000,000 additional stock, equally divided between common and 7 per cent cumulative participating stock, both of $10 par value, is being offered. It will practically double the company's conservative capitalization, which previous to this issue has not been more than $964,987.

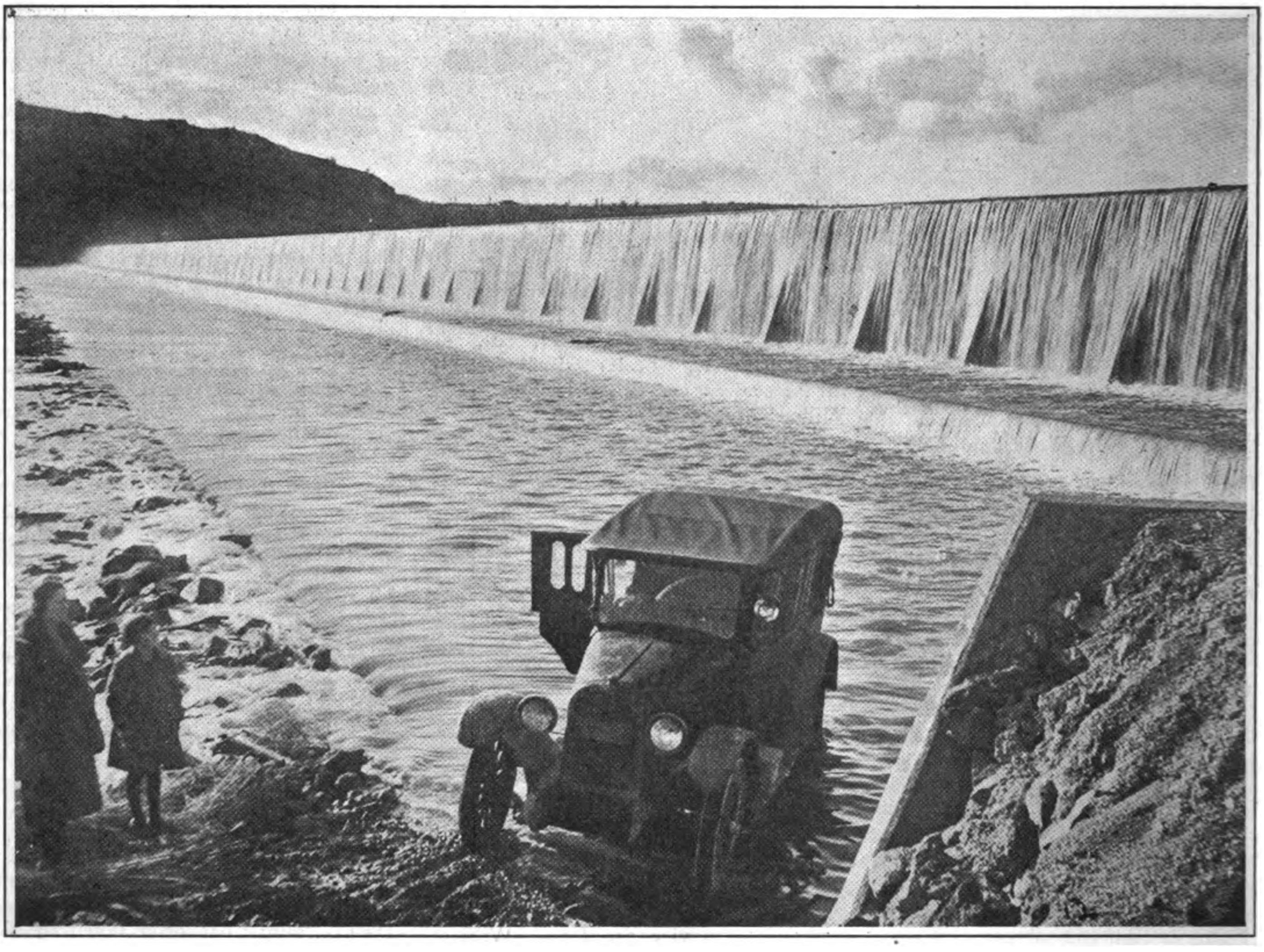
Founded in 1911 with $65,000 paid up capital stock, the company has up to 1920 earned an average of nearly 39 per cent on capital stock before deducting profits taxes. Also, it paid $97,689 in cash dividends and $615,896 in stock dividends. Profits the first year, 1912, on the small capital, were 57 per cent. Each one of the original investors has received $97.69 in cash dividends on every $100 and, as a result of stock dividends, now holds $518 worth of stock.

The company operates eight direct factory branches in California, and one in Washington, has dealers throughout California, Oregon, Washington, Utah and Arizona, and is represented in 17 foreign American and Asiatic-Pacific countries.

Its annual expenditures of more than $1,500,000 for parts and materials are mostly made with California concerns, and in the past 10 years it is reported to have handled a business of $14,000,000 in truck sales.

Promotions in Goodrich Branch.

D. A. Lord has been made manager of truck tire sales, and E. W. Bernard, manager of pneumatic tire sales, at the San Francisco branch of B. F. Goodrich Rubber Co. They have been with Goodrich for 5 and 10 years, respectively, it is stated by W. T. Powell, Pacific Coast district manager.



HERE'S A HIGHWAY COMPOSED OF AN APRON OF WATER 2000 FEET LONG, AT GILLESPIE DAM ON GILA RIVER.

There are three routes between Los Angeles and Phoenix—via Blythe, 405 miles; via Parker, south of Blythe, 531 miles; and the San Diego-Yuma route, 512 miles. By the first two, one ferries across Colorado River near Blythe or at Parker, and approaches to the ferries are not good. By means of an "apron" of water, 2000 feet long, the width of Gillespie Dam in Gila River, east of Yuma, Ariz., 15 miles west of Buckeye and 45 miles southwest of Phoenix, it is likely much travel between Los Angeles and Phoenix will be that way. Until this dam was built, Gila River made the Yuma route difficult. The intention was to use the dam as a base for steel or concrete bridge spans. The cost was too much, so the dam's apron was widened and now is used as part of the highway. Phoenix to Buckeye is mostly concrete. With $950,000 of Federal and Arizona state and county money the route from Buckeye to Yuma County line is being well graded, drained and given a semi-hard surface. Thence to Yuma there is a well improved dirt road; and instead of a ferry over Colorado River there is a bridge. The Blythe route is used most now, and between Blythe and Mecca, toward Los Angeles, the road is being improved. In the year beginning March 1, 1921, the Blythe ferry was used by 8376 cars, Ehrenburg, once a town, but not now, being the actual ferry point. In the year beginning January 1, 1921, the Parker ferry carried 3281 cars. The car in the picture is a Nash six.

EPOCHAL MEETING HELD IN OLYMPIA

Washington Automotive Body's Annual Convention Forecasts Intent to Become a Political Factor.

Washington Automotive Trades Association held its annual convention, in Olympia, July 21-22. The 1923 convention will be there, also.

This was the first opportunity—an extraordinary one in several respects—for a large proportion of its members to meet in state convention; to see, hear and discuss with automotive and other men of national prominence; to see, hear and say things to state officials; as well as to better sense each other, for mutual benefit.

It was the real beginning, in any state, of a movement to determinedly retard the popular pastime of "soaking" motorists with taxation; also a fine start in various other ways, including statewide improvement in automotive merchandising and service.

Clearly, the association intends to be a co-operative body of strong commercial and political potentialities. The latter, seekers of a 3 cent gasoline tax will please note.

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Friday, proceedings began with a central meeting in the state senate chamber, and seven crafts meetings were held. L. W. Harkins of Tacoma, president of the Pierce County unit, called the central meeting to order. Then came program announcements; an address of welcome; and response by H. J. Garnett, president of Spokane's Automobile Chamber of Commerce. At 10:15 a. m. a symposium on the used car problem was started by P. E. Sands, of Seattle, and participated in by others from various districts. George Wessells, of Los Angeles, told about overhead costs and used cars, submitting valuable data from many dealers' experiences. After lunch P. E. Chamberlain, lecturer for the National Automobile Dealers' Association, spoke on the flat rate in repair work. Lynn Shaw, assistant general manager of the N. A. D. A. and former secretary of the Indiana state body, pictured the dealer of 1925. Ralph J. Staehli, former newspaper man, now secretary of the Portland dealers' body, told "how we are saving the dealers tax money in Oregon."

Friday afternoon the ladies toured the city. In the evening there was a pavement dance; also the banquet, with President Titus as toastmaster. Lieut. Gov. Coyle, himself thoroughly an automobile man, uttered the welcome. Fine singing, a Tacoman's blackface sketch that was a "scream," and speeches that "rang the bell."

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Saturday, again in the senate chamber, the general session. Some session! Various reports, the election, other routine, good speeches, but—get the pith of two resolutions:

1—In raising highway funds, follow the rule of equitable taxation of all property. In other words, be fair—we want no 3 cent gasoline tax! Motorists now pay 21 per cent of the state's taxes, though their vehicles represent only 4 per cent of taxable valuation.

2—Raise the state highway speed limit from 30 to 35 miles per hour. In other words, do as Continental Europe does—punish if speeding causes injury, but don't brake progress!

Note also that Lynn Shaw, of the N. A. D. A., advocated a political "motor bloc" to get needed legislation.

Also note the arbitration committee's plea that county arbitration boards reject citizens' complaints against members of the association unless complete in all particulars, and that both parties agree to abide by the boards' decisions. Repairmen, the committee said, should not be held for omissions in work if customers do not specify in detail; and on the other hand shops should require specific instructions.

Governor Hart's proposed call for a meeting with all state executives west of the Rockies, to co-operate for uniform motor vehicle laws, was endorsed strongly.

A resolution of wide meaning was passed, to urge action to protect the state's scenic beauty. Another resolution urged registration of tourists entering the state.

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As to Saturday's open forum in the senate chamber: Fred J. Dibble, state director of licenses, handled the discussion on the subject. L. D. McArdle, director of the state's efficiency department and head of its highway patrol, led on that topic. James Allen, state highway head, spoke and answered as to the roads. Gordon Lee, former Ford man in New York, chosen by Hoover to head the Automotive Division of the Department of Commerce, spoke.

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Leon E. Titus, well known Olympia distributor, was re-elected president; Kenneth McAlpin, Seattle, first vice president; Edward Anderson, Ellensburg, second vice president. William A. Simonds, Seattle, continues as secretary. The executive committee is: L. W. Harkins, Tacoma, chairman; P. E. Sands, Seattle; A. S. Eldredge, Seattle; Sig Follstad, Everett; Waldo Bronson, Olympia; L. W. Thaller, Tacoma; J. J. Gravely, Seattle; Ted Jungmeyer, Sedro Wooley; Mr. Kulp, Spokane; Harry Andrew, Yakima; G. A. Campbell, Chehalis; Fred Sherman, Auburn.

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Saturday evening, a ball at Tumwater Hall. Sunday, various—some to a golf tournament; some to Pacific Beach as guests of the Grays Harbor unit; and many trekked for home.

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Delegates from Yakima, Kittitas and Skagit Counties started for the convention by motor, Thursday; spent that night in Seattle; and early Friday morning a big caravan moved toward Olympia. From Everett, the Snohomish County men had started an hour earlier. Meantime others, from eastern counties, had crossed the Cascades.

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A considerable number of men representing various lines in the automotive industry, mostly Pacific Coast representatives but some from Chicago and farther East, were there, to exude useful information at the crafts meetings, and to help things generally.

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Socially it was delightful. The women were a factor—the first afternoon they had a reception at the governor's mansion; and at the banquet that night P. E. Chamberlain, well known lecturer for the National Automobile Dealers' Association, in telling how a neat woman customer in his former Denver garage inspired him to adopt better service methods, said:

"Can you think of anything that is cleaner or sweeter than a wonderful woman in white in the summertime?"

—

At the banquet P. E. Chamberlain, of the N. A. D. A., handed this to ye salesman who claims to be the pillar of his concern:

"No one in an automobile business dare say 'I am more important than any one else here.' The business prospers or fails on three elements: Ourselves or policies, employes or cooperation, and customers or patronage. The first two should bring the last and the cycle, rightly formed, builds up the business! It may be the pleasant voice of the telephone operator that results in the sale, it may be the smile of the cashier as a patron pays a bill. When the cycle is broken, resistance may be raised in the customer's mind by an unpleasant act or word, and that resistance is sales resistance."

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L. W. Harkins of Tacoma was not elected president, but he was mentioned as fine timber for the position.

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Attendance was several hundred. Hotel Olympian was headquarters.

FIGURES SHOW HOW SPOKANE SALES GO

Used Cars Move Well—Tourist Travel at Peak—Chain of Service Stations for Inland Empire Started.

The sale of cars in Spokane is indicated by licenses during the first ten days of July, as follows:

	Used	New
July 1	41	10
July 3	52	8
July 5	27	10
July 6	17	8
July 7	19	5
July 8	23	7
July 10	25	5

Tourist travel through Spokane reached high water mark for this season on July 15, when more than 70 cars were registered at the Highbridge camp.

A chain of automobile service stations in Spokane and throughout the Inland Empire will be installed by Consolidated Rubber Corp., at a cost of about $250,000. Construction is expected to start soon.

Spokane will be made headquarters and distributing point. The company has opened offices in Peyton Building. Eight service stations will be installed in Spokane and the first one is in construction on Grand Ave., near the Palouse Highway.

Announcement of plans is made by C. A. Roberson, president, who came from Akron, O., recently. He spent several years in the tire and rubber business there.

"We expect to employ about 30 people in Spokane after our stations get to running," said Mr. Roberson. "We will ship our product here from Texas, where we have a plant. We will purchase our gasoline and oil from local companies, and market our tires and accessories through our service stations exclusively. We expect to distribute to outside stations by truck, within a radius of 100 miles.

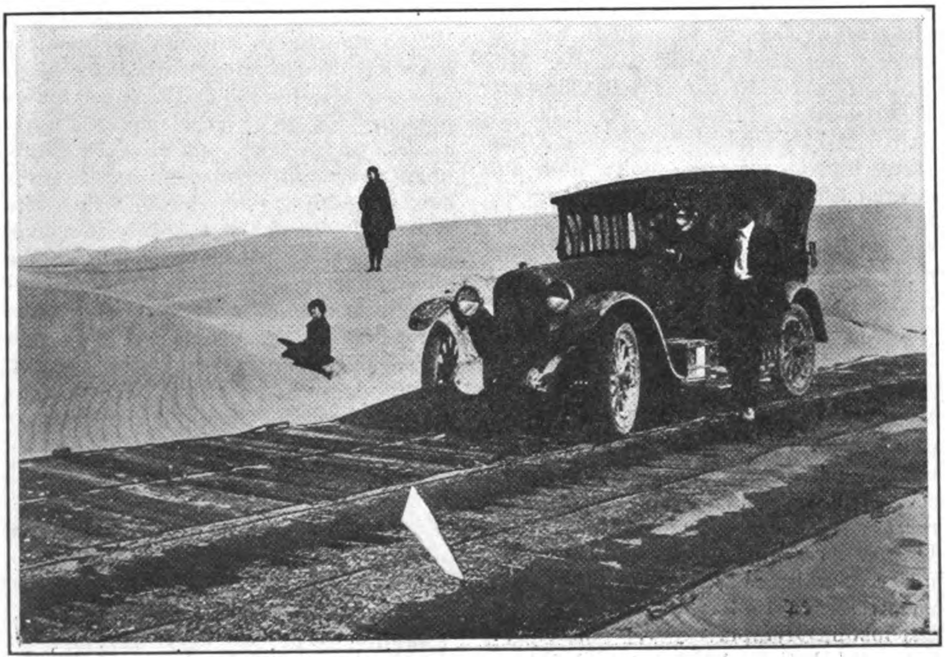
"Our company also plans to have stations in Denver, Yellowstone Park, Missoula, Butte, Seattle, Portland and down the Coast."

In the light of the alarmingly increased percentage of unrecovered cars, shown in statistics on 28 leading cities, compiled by the National Automobile Dealers' Association, Spokane figures show that the thieves have been curbed better this year than in the preceding two years. The police department has been unusually active, the figures indicate.

In 1921, of 552 cars stolen in Spokane, 506 were recovered, leaving 46 unaccounted for, considered a very low percentage in the light of the record of other cities—their average shows 40 per cent unrecovered. Spokane, for the first six months of 1922, shows only a fraction over 13 per cent of the cars stolen unrecovered.

The determination of Spokane authorities to curb speeding by imposing jail sentences, was complicated by the conviction of several society women who "could not be incarcerated in the only 'hoosegow' available for the fair sex." The problem was solved by confiscating their cars for 30 days. A section in the new county garage has been set aside for the detention of cars in this category.

Oregon's proposed minimum-speed law. providing a minimum pace of 20 miles an hour on the highways, is not approved by Spokane's commissioner of public safety. He says that while the law has many good features, it also has undesirable ones. It would keep many people off the highways altogether, as some are accustomed to travel only 12 or 15 miles an hour, he says; some are afraid to drive in traffic at 20 miles an hour. Even if it were possible to speed up an auto truck to that rate, it certainly would tear up the roads. "It seems to me it would be better to worry along with our present arrangement, although it is not entirely satisfactory to everyone," says Mr. Smith.



ON THE PLANKS BETWEEN HOLTVILLE, CALIF., AND YUMA.

Idaho to Connect with California.

Wisner Gillette Scott, of California, wrote the Raker bill now in Congress, to provide $250,000 for a War Department survey preliminary to having the Government pay for super-strong paving of a triple parallel Coast-defense road system.

Not only does Mr. Scott believe California Motor Transport Association and other exponents of organized strength, knowing the need of much stronger roads, should back this bill, but he notes with interest (as will one Asiatic nation) prospective connections, important if war on the Coast should come.

Frinstance—a proposed route from Boise, in semi-isolated Southern Idaho, to Winnemucca, on Victory Highway in Northern Nevada, with a spur from some point north of Winnemucca, more directly west toward the Alturas region in Northern California. A convention to promote the project is in prospect.

Signing up Arizona.

Compromise? There was an Arizona howl against road signs telling people how to pass through to California. That may be why the insignia of both Automobile Club of Arizona and Automobile Club of Southern California is to be on signs between Phoenix and Tucson, 138 miles of the main route through the state. The California Club's men began the work early in July. The Tucson-El Paso route is posted already.

Also already signed up is the route through the Southern Arizona wilds, Tucson to Ajo, a road as yet only "natural" but 100 miles shorter than via Phoenix to the Coast. From Ajo, southwest of Phoenix, the cutoff joins the present main route to Yuma and points west, at Sentinel.

The next sign work will be on the 80 miles between Phoenix and Sentinel, junction with the Tucson-Ajo route.

The twilight hour in the high hills these days—can you beat it?

PORTLAND TRADE RANKS INCREASE

More Concerns, More Cars, More Action Toward Co-operation, Reveal a Good General Business Aspect.

For the first time for nearly two years the automobile business in Oregon, at least in Portland, is expanding insofar as the number of dealers and cars is concerned. This indicates the improvement in general business in the last several months, and its substantial character.

Among the developments of the last few weeks in Portland, some of which have been noted before, have been the establishment of Oregon Motors, Inc., as distributors for the Chandler and Cleveland; designation of Portland as Pacific Northwest quarters for Durant Motor Co. of California and announcing of plans for rapid expansion of that company in Portland; expansion of the Murphy Motor Car Co. to represent the Auburn line; formation of a Pacific Northwest factory branch of Moreland Motor Truck Co. at Portland and opening of a retail dealership there for that truck; and developments continue.

Prasp Motor Car Co., which formerly distributed the Lincoln car, has taken the Moon line and has received a considerable shipment. The Moon was represented in Portland two years ago but had not been in that section since.

The Earl car, not represented in Portland before, will be handled by A. C. Stevens, Haynes and Winton distributor, W. J. McCallum, formerly manager of Northwest Auto Co. and of Automotive Sales Co., has joined Mr. Stevens' organization as sales manager.

Business in general, so far as both used and new cars are concerned, has shown a slight drop from the peak of May and June. This is considered seasonal, however. All signs point to a fall business much better than 1921 or even 1920. One favorable result of the slight decline has been that dealers who have been suffering from shortage of cars—and this included practically all the larger ones—have had opportunity to catch up.

Formation of a new Multnomah County trades association, as a nucleus for a state body, has been completed in Portland with the election of directors for the association by Portland Automotive Trades Association and the Automobile Dealers' Association of Portland. Each of the two bodies will be a self-governing unit in the larger one. Constitution and by-laws were adopted recently, those of the Washington and California bodies being taken as guides.

Other separate associations within the automobile industry of Portland, such as the rubber association, equipment jobbers, etc., will be eligible and will be urged to join the county association, and it is expected the membership will be enlarged rapidly. When the county association is on a firm footing, steps to launch the Oregon Automotive Trades Association will be launched. This will be patterned after the Washington and California state bodies, and will attempt to bring into one association the various automobile organizations in the state.

Directors elected to the Multnomah County association are: For the Portland Automobile Dealers' Association, Jack Crittenden, of the Covey Motor Car Co.; A. B. Manley of Manley Auto Co., and C. L. Boss of C. L. Boss Automobile Co.; for the Automotive Trades Association, Fred Dundee, C. H. McGirr, A. E. Foss, R. D. O'Brien and Edward Burke. Mr. Dundee owns the Dundee Machine Shop, Mr. Foss is in the battery business, and the three others run garages.

KNOCKING IS TABOO.

The Chicago Automobile Trade Association, through its ethics committee, has issued a letter to all members of the association urging them to see that members of their sales organization do not deliberately disparage or knock the product handled by competitors.

"When we disparage a competitor either privately or publicly we discredit our industry, and when we discredit our industry we discredit ourselves."

The ethics committee of the association is reviving the old creed of the association and will provide every member with a copy with the request that it be framed and hung on the wall "so that the whole world may know there is harmony and business ethics in the automobile business."—Elgin Auto-gram.

Oregon Motor Supply Credit Association held its annual picnic recently at the old Automobile Club grounds near Portland. The affair was declared the best in the 14 years' history of the body. It is made up of nearly all the Portland automobile equipment and accessory jobbers. The committee in charge of the program consisted of Ernest S. Olson and C. L. Sigloh, the latter being secretary of the association. A committee composed of Charles E. Mace, W. J. Finke and J. L. Jones had charge of transportation arrangements.

Gordon Lee, head of the automotive division of the Department of Commerce, spent six days in Oregon, on a tour of the Pacific Coast to speak to various automobile associations. Mr. Lee's visit in Oregon consisted of one day at Medford, where he spoke to the Medford and Ashland dealers; one day at Crater Lake National Park as guest of the dealers of that section; a day at the state capitol, Salem; and three days in Portland, where he was the guest of honor and principal speaker at a banquet at Multnomah Hotel, at which nearly 100 automobile men of the Rose City attended. He also spoke before the Portland Ad Club at its regular weekly luncheon meeting, and was taken over the Columbia River highway by the Portland dealers. Following his stay in Portland he went to Olympia, Wash., to attend the annual session of the affiliated automobile organizations of Washington.

Tillotson, Appleton Head on Coast.

Recently the Appleton Electric Co., 1701-13 Wellington Ave., Chicago, manufacturing conduit fittings, lighting and other electrical specialties, announced that R. P. Tillotson, who has been with the company 13 years as Western sales manager and director, has taken charge of the California territory, in which the Appleton Co. formerly was represented by Keeler, White Co. of San Francisco. A branch office and warehouse will be maintained in Los Angeles.

Goodnow Heads DeLuxe Sales.

Clark-Turner Piston Co., Los Angeles, manufacturer of DeLuxe lightweight cast iron pistons, announces the appointment of Harold E. Goodnow as sales manager. Mr. Goodnow originated and directed the Repair It Now campaign, and recently completed an extensive Eastern trip in developing plans which will result in new merchandising and advertising campaigns for the DeLuxe piston.

More Dort Economy.

Using only 3 gallons of gasoline in 97.27 miles, and no perceptible quantity of oil, was a recent economy record by a Dort car between Los Angeles and Arrowhead Lake. The run involved a 4000 foot climb of 7 miles. In spite of the intense heat, the water in the radiator never reached the boiling point. The run was checked by Los Angeles newespaper men.

To Push Davis Car on Coast.

Fred B. Clark, of Los Angeles, has been appointed Pacific Coast representative of George W. Davis Motor Car Co., Richmond, Ind., manufacturing the Davis Six. Mr. Clark is widely known to automobile dealers and distributors in his territory.

OAKLAND AGENCIES INCREASE BY FOUR

Metropolis on East Shore of the Bay So Active Automotively that Summer Lassitude Seems Unlikely.

Four new agencies for passenger cars have been announced lately in Oakland, as evidence of the activity which bids fair to outride the traditional period of summer lassitude as far as automobile sales are concerned.

O. C. Hinz, 2828-40 Broadway, has taken the Liberty car for Alameda and Contra Costa Counties. He formerly was wholesale manager for Reo Motor Car Co. of California, at San Francisco headquarters, and previous to that was a large distributor at Lansing, Mich., 8 years.

Eastbay distribution of Dorris and Auburn cars has been secured by Oakland Garage, Inc., operated by the Lloyd brothers, with W. R. Rook as manager.

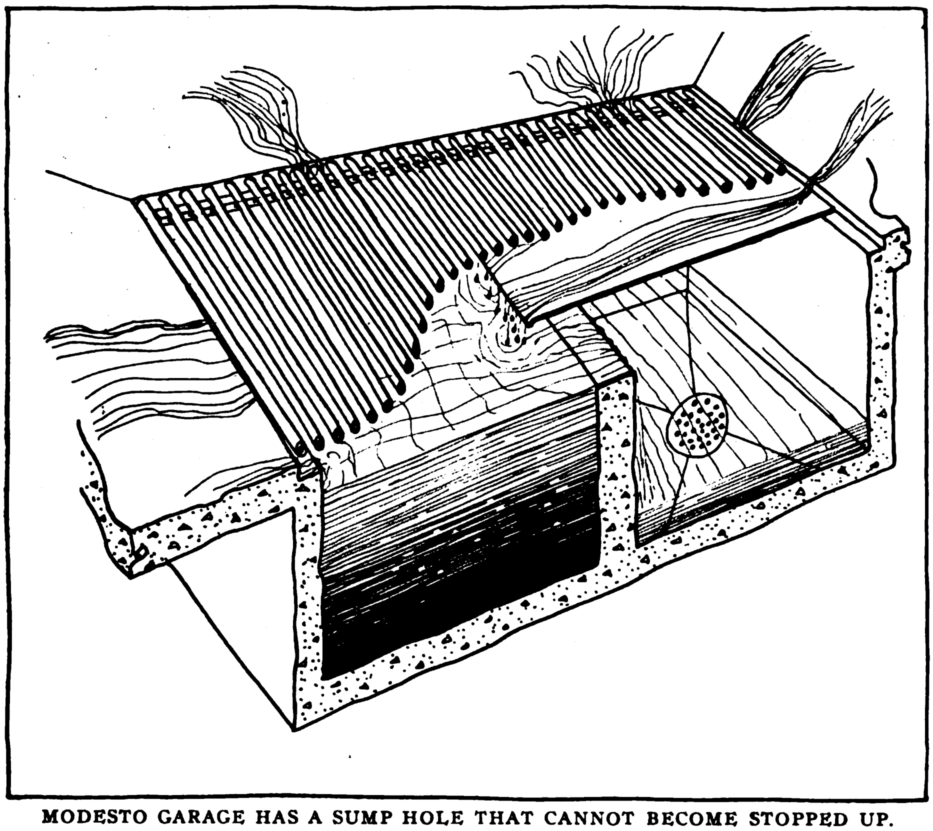
Haynes Auto Sales Co., San Francisco, direct factory branch, has opened a sub-branch in Oakland, 2412 Broadway. M. S. Bury, previously a salesman in Oakland for San Francisco headquarters for several years, is the new branch manager.

John Wichman, a member of Hamlin & Wichman, Hudson and Essex agency, but previously centering his interests in San Francisco, has sold his holdings there to become secretary-treasurer of the Oakland concern. With E. A. Hamlin he bought the Hudson and Essex rights from A. E. Boqua a year ago, when the latter decided to take these lines in a Southern California city. Hamlin & Wichman handled a $110,000 business in June.

T. P. Heenan has been apponted sales manager of Victory Motor Sales Co. He formerly was advertising manager for a Ford and Lincoln dealer in Denver.

Alameda County Automobile Trade Association held its annual meeting recently and elected officers. Nelson Scotchler, Ford and Lincoln dealer in Berkeley, is the new president; Bill Mackay, of Mackay & Austin, Oakland, and Jack Bowers, of Brask Bros. & Bowers, Oakland, are the new vice presidents; Charles Hebrank, of Hebrank, Hunter & Peacock, Oakland, continues as treasurer.

Oakland Tire & Rim Co., 2821 Broadway, has bought the Oakland branch of Keaton Tire & Rubber Co., San Francisco and Los Angeles. The new concern is headed by E. L. Bee, who was Keaton manager in Oakland 5 years, and C. A. Holman, and will handle wholesale distribution of all makes of rims in Oakland, Berkeley and Alameda.



MODESTO GARAGE HAS A SUMP HOLE THAT CANNOT BECOME STOPPED UP.

The picture shows how a sump hole installed in the washing rack of the Silva Garage at Modesto, Calif., is constructed to prevent its becoming clogged up. The sump hole is 4 feet square and 4 feet deep. It is divided into two sections by a concrete wall. The water and mud drops into the section, indicated at the left, and rises and flows over the top of the concrete wall into the other section, leaving all mud behind, to be cleaned out. At the top of the pit is a special grating of metal pipes. Suspended under the grating is a piece of sheet metal which extends a little over half way across the sump and carries water and mud from the wash rack into the proper section.

Coast Plant for USL Battery.

U. S. Light & Heat Corp. of California has been organized and incorporated as a subsidiary of U. S. Light & Heat Corp., Niagara Falls, N. Y., manufacturer of USL storage batteries, railroad car lighting devices and electric arc welders. A site has been leased at East 14th St. and 54th Ave., Oakland, and construction has started on a new plant. This will enable a more efficient handling of the demand for USL products on the Pacific Coast, and it is anticipated that production will start about October 1. The Eastern factory recently took the contract for supplying USL batteries for the new Durant car.

Represents Perfect Circle Ring.

Glen Harkrader, former sales manager of No-Leak-O Piston Ring Co., Baltimore, has been appointed territorial representative for Indiana Piston Ring Co., Hagerstown, Ind., in the territory west of the Mississippi, and in Minnesota, Wisconsin and Illinois. Indiana Piston Ring Co. manufactures the Perfect Circle oil-regulating piston ring. Maintaining general offices in Chicago and San Francisco, Mr. Harkrader will be assisted by his brother, Wallace Harkrader, former No-Leak-O representative in Illinois and Indiana.

Piedmont's Northwest Distribution.

Walla Walla, Wash., has been selected as the distributing center for Washington, Oregon and Idaho by Piedmont Motor Co., of Lynchburg, Va. The company has been building and distributing cars in the East for seven years, and is invading the West for the first time. J. A. Carson, formerly with the Tierney Toner Co., will be the distributing agent.

Re Prices in "Dave's" Catalog.

Motor West's report in July 1 issue, of the Automotive Equipment Association's meeting at Colorado Springs, contained an item on a discussion of "Dave," of Detroit, "whose handsome catalog shows cut rate prices on all standard equipment." The quoted words stand corrected. It appears that the catalog does not contain cut prices.

Heads U. S. Tire Branch Sales.

H. O. Bock, for 10 years with United States Rubber Co., and possessed of long experience in the Los Angeles field, now has charge of Los Angeles branch tire sales, it is announced by J. B. Magee, Pacific Coast manager.

SAN FRANCISCO IS AFTER THAT ROAD!

Realization Nears, as to an East Side Route—Business Eases Slightly But Sales Very Good, at That.

After a year's discussion, and the vigorous campaigns conducted by prominent citizens, business associations and especially the Motor Car Dealers' Association, California State Automobile Association, and newspapers, San Francisco still is connected with the remainder of California by only one good automobile highway; but the activity for a second main route down the Peninsula has resulted in some substantial progress toward realization.

The city board of supervisors now is favorable, and two of its members are working energetically for a new road, but the board feels that the other counties and outside communities which will benefit should pay their share, a matter difficult to determine with exactness.

However, San Francisco and San Mateo Counties have been formed into a joint highway district to facilitate surveying of the proposed road, and several meetings have been held between city officials and state highway commission engineers. Surveying is under way and will be completed in the early fall, it is believed.

From the start finances have been the big question, but this will be solved if a resolution introduced by Supervisor Mulvihill is approved. He would have the city's refund from the motor vehicle tax for 1923 and 1924, amounting to more than $300,000 annually, pledged for the building of the second main highway. He is against a 5 cent levy in taxes, as it would put the entire burden on the people of San Francisco. The motor vehicle tax refund normally is used for road work anyway, so there is no question of constitutionality.

As was expected, the July 4 holiday period gave crowning proof of the need for another highway to accommodate the tremendous motor vehicle travel, which for four days taxed the one road to capacity.

Strong endorsement has been given by California State Automobile Association, through George S. Forderer, president, who says: "Build the east side highway down the Peninsula with the least possible delay. The traffic there absolutely requires it, and in a large degree the very future of San Francisco demands it."

Irrespective of the progress made on the east side route, the new Skyline Boulevard, now being pushed along the seaward side of the low Coast Range hills and leading out of the Mission district of San Francisco, is expected to help in somewhat easing the congestion along the main highway paralleling the Bay. It is more or less a scenic route, and remote from the main line of travel, but already is 75 per cent completed and will be ready for use in the early fall.

Developing later than usual this year, a slight seasonal falling off in sales is making itself felt among the distributors of practically all makes of cars in San Francisco. They are given time to reminisce on the very satisfactory activities of the first half of the revival year of 1922, which has done much to compensate for 18 months of slackening sales and lean returns.

Motor truck business is especially satisfactory, considering general conditions and the fact that commercial vehicles always run far behind passenger car sales. Sales of White trucks on the Pacific Coast, for example, were 85 per cent larger in the second quarter of 1922 than in the first quarter, and 21.4 per cent better than in the best quarter of 1921.

THE REAL SALESMAN.

One who has a steady eye, a steady nerve, a steady tongue and steady habits.

One who understands men and who can make himself understood by men.

One who turns up with a smile and still smiles if he is turned down.

One who is silent when he has nothing to say, and also when the buyer has something to say.

One who keeps his word, his temper, and his friends.

One who wins respect by being respectable and respectful.

One who can be courteous in the face of discourtesy.

One who has self-confidence, but does not show it.

One who is loved by his fellow men.—The Salt Seller.

Reo Motor Car Co. of California reports that one of its salesmen, Bill Hampel, recently delivered a fleet of 10 Reo taxicabs to the Checker Taxicab Co., San Francisco, and took an order for 35 more, to be delivered as soon as they arrive.

Norman Whichello has been made manager of the truck division of L. M. Field, Inc., to have charge of the Selden truck department. He has had many years' experience as chief electrical and mechanical engineer for several large Eastern factories, and was inventor and patentee of the fixed tongue monorail system of overhead transportation for industrial plants.

John W. Alden has been made sales manager of Willys-Overland Pacific Co., factory branch. His Overland connections began in 1910, and recently he has been in charge of the parts and service departments of the San Francisco branch.

In the past three years, 150 Auburn and Dorris cars have been sold in Northern California by H. A. Seller-Cummings Co., San Francisco, with a branch in Fresno for San Joaquin Valley. The list of present owners in San Francisco includes some of the most prominent banking and business figures on the Coast.

Anderson-Smith Motor Co. delivered more than 200 Chevrolets in the first 15 days of July, according to R. A. Smith, president, running at from 9 to 27 sales a day, this latter high mark on a Saturday. At that rate, sales for July were expected to be between 400 and 450 for the month, exclusive of used cars.

Sales of model 61 Cadillac cars from January 1 to July 15 this year totaled 1294 in California, it is reported by Don Lee, state distributor.

New models recently come to hand among the distributors are the Winton 40 touring car and sport sedan; Oakland coupe; Oldsmobile sport model; Haynes 75 speedster and 5 passenger brougham; and Stanley 740 types.

California Registrations.

In Motor West of July 15 a table showed registrations of new passenger cars and trucks in California for the first half of 1921, compared with the corresponding period of 1921; but official figures for Northern California were not obtainable, so its passenger car registration was estimated at 7200. The actual figures, received since are 6667. The estimate for motor trucks in Northern California was 875; official figures are 909.

As reported before, the gain over last year, for the state, is 44 per cent for passenger cars. The increase in motor truck registrations is about 51 per cent.

Gasoline Tax Anniversary.

The state of Washington received $879,427 from the state gasoline tax during the first 12 months it has been in operation, as of June 1. The monthly figures since July, 1921, throw some light on the seasonal variation of gasoline consumption, and hence of motor vehicle use. August, 1921, showed tax returns of $98,356—the high mark, very evidently, of automobile travel; and January, 1922, is the low mark, with $47,003. Receipts for motor vehicle licenses passed the $6,000,000 mark in the second week of July, states Fred J. Dibble, director of licenses.

Put yucca hounds in the dog pound!

L. A. DEALERS HEAR ABOUT CONGESTION

High Ratio of Motor Vehicle Sales to Population Backs Up Expert's Plea for More Traffic Routes.

The recent regular monthly meeting of the Motor Car Dealers' Association of Los Angeles probably was the most interesting held this year. More than 50 distributors, dealers and representatives, were present at the Los Angeles Athletic Club, listening to a masterly treatment of the traffic problem by Gordon C. Whitnall, secretary of the city planning commission.

Mr. Whitnall declared the only way to eliminate congestion is to open new main lines of travel that will avoid congested centers.

Los Angeles, he said, has traffic problems that no other municipalities of its size have. "The first of these is that of the country's large cities Los Angeles has more motor vehicles in proportion to population, operating in a smaller percentage of street area compared to total built-up area, than any other city except Columbus, O. Two extremes — larger vehicle ownership and small street area. In addition, climate permits year-around operation of motor vehicles, so that a larger percentage of the total is in constant operation than in Eastern cities."

Traffic congestion is spreading beyond the numerous new city subdivisions and developing between them and the 20 to 30 large municipalities in the greater Los Angeles area, Mr. Whitnall said. In a short time this country boulevard traffic will be hampered by vexatious and dangerous jams. There must be co-operation between every community concerned—that has been settled definitely and every municipality in the county is giving it—to provide for the future.

Admittedly, the very satisfactory volume of sales which Los Angeles distributors are still handling will do nothing to ease the traffic tension. However, from the earliest pioneering days automobile men have been, individually and through their association, consistent and generous workers in all projects for civic betterment and law observance, traffic regulations included.

Low priced cars have the proverbial advantage when large absorption by the public is concerned, but the entire price range of American automobiles is enjoying strong favor in Los Angeles. This is shown by late reports regarding Chevrolet and Packard sales, representing practically the two extremes of price.

Demand for the Chevrolet is so strong in the Coast region that the Oakland factory, it is reported, has been unable to supply all the cars needed. In June 761 Chevrolet cars were sold in California, and in Los Angeles one authorized Chevrolet dealer , J. W. Baldwin, sold more than 100 cars during the month, and obtained a special shipment from the St. Louis assembly plant to fill all his orders.

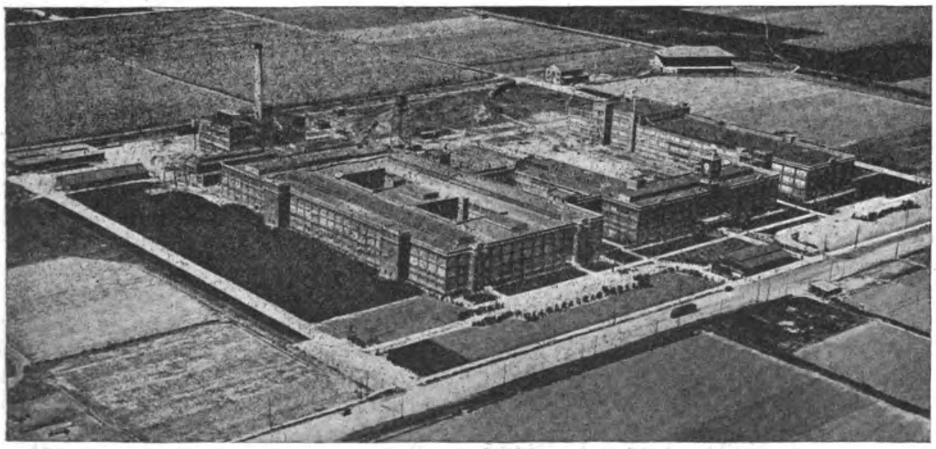
Packard sales throughout the state in the first 6 months gained 180 per cent over the same period of 1921, according to Earle C. Anthony, Inc., of Los Angeles and San Francisco, compared with the average increase of 41 per cent for all other makes combined.

New models recently put on display are the Rickenbacker flying phaeton, Bungaloo coupe, and Wilshire sedan; Durant 4 and 6 cylinder closed types, all models; and Jewett roadster.

Under A. A. A. supervision, a Stephens car recently traveled from Los Angeles to San Francisco and return on 21½ gallons of gasoline, averaging 40.4 miles per gallon, and no replenishment of oil. The trip was up the inland and down the shore route.

California-Oakland Co., distributing the Oakland car in Southern California through separate wholesale and retail branches in Los Angeles, has leased a large 2 story, 74x240 foot building to be erected at 1927 South Figueroa St., which will contain both departments and be completed in the early fall.

H. J. Ruddle Co., Fageol truck and tractor distributor in Southern California, located on North Los Angeles St. several years, has moved into a recently completed and larger building, Ninth St. and Towne Ave.



A BIRDSEYE VIEW OF THE GREAT GOODYEAR PLANT IN LOS ANGELES.

District Office in Marysville.

Five counties in Northern California—Yuba, Sutter, Colusa, Nevada and Sierra — will be served by the new (twelfth) district office of California State Automobile Association, in Marysville. Field Secretary F. V. Dewey has sought a suitable site and L. E. Cutler, formerly of the Sacramento office, which previously has served the counties named, will be in charge.

In addition to Sacramento and Marysville, there are district offices in Redding, Chico, Santa Rosa, Vallejo, Oakland, San Jose, Salinas, Stockton, Modesto and Fresno.

The association's eighth touring bureau will be at Susanville, Lassen County, to meet a demand for direct service in that large section. Other touring bureaus are at Eureka, Napa, Yosemite, Coalinga, Hanford, Merced and Santa Cruz.

Tour Will Cause Co-operation.

Los Angeles County is rich scenically. Many San Diegans waste much valuable time knocking Los Angeles generally. A wiser thing has happened, though—a 3 day motor tour, with Los Angeles newspaper and free employment bureau men as guests of the San Diego Mountain Resorts Association. It started early last Saturday and that night was spent at a Cuyamaca Mountain resort; Sunday night on glorious Palomar; and it ended last night, Monday. The route was via Oceanside, the world headquarters of the Rosicrucian Fellowship, San Luis Rey Mission, San Diego, Cuyamaca Mountains, Ramona, Warner Hot Springs, Lake Henshaw, Palomar, Pala, La Jolla Indian Reservation, Escondido and Fallbrook; thence to Riverside and home.

A Mere $400,000 Truck Order.

July 24, Los Angeles' city council's supply committee's report, that of nine bids on 107 trucks Garford Motor Truck Co.'s, $398,968, was lowest, was referred to the finance committee. The salesman, it is said, will receive $40,000 commission if he closes the deal, which is on a 3 year "leasing" plan owing to the city's annual-expenditure limit.

GREAT RADIO TRIP DETROIT TO COAST

Two Completely Equipped Rickenbacker Cars Draw Melodies from Afar On the Desert Air.

What is believed to be the first Detroit-to-Coast trip made by a radio-equipped car was recently completed in San Francisco by two Rickenbacker cars. One was the radio receiving car with complete apparatus, the other the supply car. The two drivers, Wallace B. Blood and O. W. Heinz, well known automobile men of Detroit, were accompanied by their wives. Lincoln Highway was followed, and every night, according to Mrs. Blood, they were able to "tune in," no matter how lonely or out-of-the-way the spot. One night, nearing Omaha, they listened to the Follies in New York City, and nearly every evening were entertained by vaudeville stars one or two thousand miles away. Sacred concerts were drawn from the desert air in Utah and Nevada. The trip had the official good wishes of the Detroit Board of Commerce, Detroit Automobile Club, and Lincoln Highway Association.

In San Francisco they were greeted by Charles H. Kaar Co., Rickenbacker agency, then proceeded on to Los Angeles, stopped there a few days, and turned northward for Seattle, but ultimately will return for a short tour of Southern California as guests of Leon T. Shettler, Los Angeles distributor. Both cars were loaded heavily, each carrying nearly three-quarters of a ton in addition to passengers, but so smooth-riding were the cars on the roughest roads that a replacement supply of audion tubes and other sensitive apparatus was not needed.

Deglarescope on Pacific Coast.

George Pearson, Jr., well known in the automobile distributing field on the Pacific Coast, has become exclusive distributor in California for the Deglarescope. This is a headlight device to eliminate glare by hiding the source of light, that is, both filament and reflector, from the eyes of approaching drivers and pedestrians. Projection of direct, horizontal rays, comprising the main beam of light, is not interfered with, but all upward, out-of-focus rays are turned downward by reflection.

From offices in both Los Angeles and San Francisco, Mr. Pearson will conduct a vigorous sales campaign. He resigned recently as sales manager of Union Motors, Inc., Los Angeles, Maxwell distributor, to resume his old connection with T. J. Toner, former Pacific Coast supervisor for Maxwell, and now president of Deglarescope Co., Detroit, the manufacturer.

Deferred Payment Sales Prosper.

Payment by Western Automotive Finance Corp. of Los Angeles, of its seventh quarterly dividend of 2 per cent on both common and preferred stock, July 1, brings again to notice the extremely satisfactory rate of growth it has enjoyed since it began in 1920. It handles a large business in financing automobile sales on the deferred payment plan, and its board of directors includes many prominent automobile distributors. Likewise, its prosperity is a striking instance of the stable basis on which deferred payment automobile sales now rest. Authorized capitalization is $1,000,000, and stock outstanding May 31 was $211,000, which is now being increased by a new offering of $50 par, 8 per cent stock. Net earnings in 1921 were 2½ times dividend requirements.

MONEY AND BANKING.

Monetary conditions are easy over the entire country, as evidenced by the liquidation of the Reserve banks. The low point of "discounted bills" in the twelve banks was on June 7, last, when the total was $420,000,000, which compares with $1,896,000,000 on June 6, 1921, and $2,826,000,000 on November 5, 1920. Of course, the reduction of the bills discounted in the Reserve banks is no criterion by which to judge of liquidation by the member banks. The average reduction of all loans in member banks is about 12 per cent from the top, but of commercial loans about 30 per cent. Of commercial loans in New York City banks it is about 40 per cent. Member bank deposits, as shown by the 800 reporting banks, are practically at the record level.—National City Bank of New York, July bulletin.

Real Tire Plant in Spokane.

Jack Tire and Rubber Company's plant at Spokane has a payroll of 50 people and is making 50 tires and tubes per day, according to T. G. Richards, president and manager. The plant commenced operation March 15 and has increased production gradually. The capacity of the present equipment and working force is 100 tires and tubes daily.

Tires are being shipped as far east as Billings, south to Boise, north to the Canadian boundary and west to Seattle and Portland. Five salesmen are covering Washington and Idaho, and the number of dealers increased from 10 to 150 between April 1 and June 15.

Ensign Reputation Worldwide.

Ensign Carburetor Co., Los Angeles, is now shipping about 900 Ensign carburetors weekly to International Harvester Co., Chicago, for installation on International trucks. According to Bert DeBlin, sales manager, close to 75,000 Ensigns have been shipped from Los Angeles to the great plant at Chicago in the past two years for International trucks and all three I. H. C. kerosene-burning tractor models. Seventy-five per cent of Ensign business is east of the Rockies, but on the Coast these carburetors are found functioning excellently on motor vehicles and such well known tractors as Best, Kroyer and Holt.

Without making any strong drive for foreign trade, the company already has a very satisfactory export business, especially where high gasoline costs make kerosene the logical fuel, as at Capetown, South Africa, where gasoline per imperial gallon costs $1.28, and kerosene, 36 cents. Even in Cuba, where alcohol now costs about 12 cents a gallon, against $1.10 for gasoline and 36 cents for kerosene, Ensign carburetors are known, and an order was received to equip a fleet of taxicabs with them.

Tourists? Oh, a Few.

Let's take the handiest data, indicating how people insist on progressing westward. Los Angeles' chamber of commerce arose to remark, July 20, that about 500,000 persons of westward tendency had arrived in the city in the six months—many more than in the same period last year. By motor car, 126,000, averaging 21,000 a month; calculated on 3 persons per car; how number of cars ascertained, not stated. By rail, 309,521. The remainder, about 65,000, by steamer. Some came for conventions, but very many came to stay. In one week the chamber sent out 131,000 pieces of printed matter, indicating the volume of inquiries.

New blood brings new money and more productive ability. What's happening in Los Angeles is happening to all parts of the Pacific region, according to their merits and how ably they proclaim them elsewhere.

Quite a String of 'Em.

One ceases to size up facts sensationally, when used to tabulated statistics; but tell a man 25,000 automobiles were sold in one Coast city—Los Angeles—in the first half of 1922, and he is likely to visualize a considerable string of cars and dollars—of the latter, 25,000,000 if the average be put at 1000 per car.

What more lovely, these days, than roamin' in the gloamin'?

Motor West
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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AUGUST 1, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

Ruminations About Radio

WE got the sheet to press, washed up, supped, took a trip to the West Indies on a screen, made up lost sleep, and this is the morning after. The grind will get us soon enough again, so let's just browse, speculate, awhile. About what? Something says "Radio."

Considering it as an industry, one well may envy the three or four manufacturers who control the patents that count, and have a mutual chief distributor. Yet, a comparison:

It has taken about 20 years to increase the number of automobiles from none to 10,000,000. After about 10 years of radio experimenting—too much of it, perhaps, but only perhaps, in an effort at transmission as well as receiving by individuals—it was realized that the big market was for receiving sets, and that the logical outlook for transmission was that it would have to be mostly broadcasting from powerful stations, much too expensive for individuals to own. Presto! In a few months the number of buyers of receiving sets has increased from 50,000 to 500,000. True, the manufacturers deserve little credit for the present large demand, which grew out of revelations of radio power demonstrated by a horrible war.

A good radio set costs $100, or more. That is only half what many phonographs cost, and if the broadcasting continues to be good, and free, many of the 6,000,000 phonographs in this country may be displaced. That there will be that many radio sets in use, anyway, in due time, seems a safe guess. Radio commercial experts say that would mean an annual business of $60,000,000—a shade less than is said to be spent annually by drug addicts, and incomparably more desirable. The first-cost investment by radio set users, at $100 each, would be $600,000,000.

Big business. However—the wholesale value of the 1921 output alone of American motor cars and trucks, was $1,260,000,000; of parts and accessories, $409,710,000; of tire replacements, $542,358,420; grand total, $2,212,068,420. Bigger business!

So, don't feel envious about the radio business. Get into it if you are in a line of the automotive industry that will warrant it; and encourage it, even with your purse, if the call comes, as it may. We know a department store man who built a big building which pitying persons said was too far from the center of things. He even helped finance one or two competitors who, by hard coaxing, were induced to quit the old part of town, where they were behind the procession, and get into fine new buildings near where he was—out at the front edge. He didn't fear them. He took his chance of getting a fair share of the trade he hoped would come—and he is getting plenty of it. By helping the other pioneers he helped himself.

Just now, newspaper proprietors are helping everybody who has a radio receiving set. Good citizenship, but odd commercially, because presumably not for any definite self-profit to come. It even is hinted that radio broadcasting of news may hinder newspaper circulation. Let the publishers worry, and they will be foolish if they do, because anything that helps everybody must increase general happiness, producing ability, prosperity and ability to buy. Yet, newspaper and other present broadcasting stations may ease up, though it would pay radio manufacturers to help maintain them. If the time comes when individual endowments, or municipal funds, or public subscriptions, or establishment of community chests, will be sought for huge broadcasting stations or receiving auditoriums, chip in. Better than museums, more available than libraries, quite as worthy as the great system of night lectures every winter in New York's school buildings, for which taxpayers provide a large sum, will be any municipal movement for increasing enjoyment and education by radio. Viewed commercially, the more intelligent people are the better customers they are for everything intelligent people want.

Wonderful, is radio. Yet, absolutely simple, the idea itself; waves of ether, like waves of water. Perhaps the wise humans said to have lived 30,000 years ago where Egypt's pyramids are, and who built those pyramids with a knowledge of lifting power the Egyptians, who came only a few thousand years ago, did not understand, and we do not understand, knew all about radio; even about thought transference. Some very scientific men think so. As to radio waves, Marconi says no station on this sphere is strong enough to have sent the one he received on his yacht, a year or so ago. He does not deny it may have come from Mars, and if it did he is about to give Mars another chance, now that it is only 42,000,000 miles away, closer than it has been since 1913. Some students of the solar system say our world is the only one in the big bunch going around the sun that has just our conditions;

that Mars' conditions are the nearest to ours, and probably more advanced as Mars is older, farther on the way back from the outer circumference of the solar globe of ether, to the point where it will stop circling, pop into Old Sol and cause another sun spot, melt and bye and bye be pushed out by some other bumper and go as ether to the outer edge again to do the whole stunt over.

Marconi says that for a goodly cluster of millions of dollars we could build a transmitter that would send a radio wave to Mars—presumably in about 23 seconds, as the waves travel 186,000 miles a second, the same as light waves, which travel through the same ether.

This is getting too far from the commercial angle, and this is a commercial journal. As such, it is for radio strong, and not a bit envious or fearful of it. This business has improvements of its own to look after. The automobile still is crude. If you don't agree, remember that in every field where progress has been continuous, what seemed perfect soon was called a contraption. We use rear drive instead of front drive. Our gear shifts some day will be remembered as makeshifts; and so on. Instead of bragging of how smart we are, let us look back at what we once considered smart. It will help us look ahead more clearly. For a long, long time, commerce and people will move mostly on wheels, and there is a much larger market for improvement ahead of us, than for contraptions behind us.

Be Thankful This is Happening

SOME children not more than 4 years of age can identify, offhand, ten times as many makes of motor cars as most grownups can. It is the young boys who are doing the most, and doing it most practically, with radio application. In many respects youth is breaking away from precedent. No longer is it so, apparently, that there are some truths children do not, must not, understand. They are finding out the actual, bedrock facts about things which the majority of older minds, which have ripened in ruts, do not and will not grasp.

All of which is fine and dandy. It is high time many precedents were wiped out. Probably the present onrush of the young for knowledge will hasten educational methods so that basic reasoning will supplant dogmatic thinking. One logical result would be sensible co-operation and the end of war, false financing, economic depression and other foolish customs.

Age ripens judgment, but it also confirms wrong ideas, according to the reaction, as years pass, to education received in the various schools one goes through. Even in the school of hard knocks, through inability to think straight, many errors are begun and developed into prejudice and superstition. By putting all these behind them, and starting over new, the young folks will do better. The posterity just at hand will mature correctly, along new lines. It will have no patience with a number of stereotyped mistakes which middle aged people of today practice as they were practiced hundreds of years ago.

When you sell yourself, be sure that you don't misrepresent the goods.

The Save the Surface Campaign doesn't apply to the unvarnished truth.

Air Landings on Roosevelt-Midland

A brief but very important news item: Wisner Gillette Scott, as vice president of National Roosevelt-Midland Trail, is going to tackle the task of having airplane landings, 25 miles apart, established along the entire route. Mr. Scott has put through other great projects, with a minimum of noise and personal credit, and his plan no doubt will be put through this time. He originated the highway airplane landing idea, which since has been accredited to others and modestly accepted by them as their own.

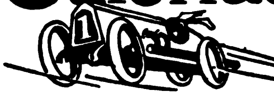
Expected Slow-Up Is Slow Coming

They are expecting it—the summer slow-up—in Detroit, but as late as July 4 close observers could not see it. Help Wanted signs on factory gates were more numerous, and consumption of power current and raw materals larger than ever.

Large Employment Increase Shown

Department of Commerce finds that 1428 concerns, usually employing more than 500 workers each, in 65 principal cities, employed 3.2 per cent more in June than on April 30; and that the automobile industry leads.

Calendar of Coming Events



Aug. 6—Cotati, Calif., 50 and 100 Mile Races and 50 Mile Race for Dealers.

Aug. 8—San Diego Motor Car Dealers' Economy Run, A. A. A.-sanctioned, San Diego to El Centro, and return, 12 hours.

Aug. 12-16—First Annual Automobile and Accessory Show at Watsonville, Calif., by Watsonville Motor Car Dealers' Assn.

Aug. 29—National Safety Congress, Detroit.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

Sept. 4-9—Spokane's Annual Automobile Show, in connection with Spokane Interstate Fair. B. J. Garnet, Manager.

Sept. 6—Labor Day Race, Uniontown, Pa.

Sept. 7-Nov. 15—Automobile Exhibit, Rio de Janeiro, in connection with Brazil's Centenary Exposition.

Sept. 9-16—Automobile and County Industrial Show, Modesto, Calif., under auspices of Stanislaus County Auto Tradesmen's Assn.

Sept. 13-15—Sixth Annual Fall Convention, Motor and Accessory Manufacturers Assn., Hotel Lafayette, Buffalo.

Sept. 15-20—Annual Show at The Hague, Netherlands.

Sept. 16—Opening of New Track at Kansas City.

Sept. 25-Oct. 3—Automobile Show, Kaiserdamm Hall, Berlin, Auspices German Automobile Mfrs. Assn.

Sept. 30—150 Mile Race, Fresno, Calif.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Oct. 18-20—Convention of National Association of Farm Equipment Manufacturers.

November—Tent Show by Motor Car Dealers' Assn. of Los Angeles.

Nov. 3-11—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 13-28—Automotive Equipment Assn. Annual Show Chicago.

Nov. 30 (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

Jan. 6-13—National Show, Grand Central Palace, New York.

Jan. 6-13—Automobile Salon, Hotel Commodore, New York.

Jan. 27-Feb. 3—National Show, Coliseum and First Regiment Armory, Chicago.

Jan. 27-Feb. 3—Automobile Salon, Chicago.

1923 Buicks are Announced

Line of 14 Models Includes Two New Touring Sedans in Both Four and Six Cylinder Types

A complete new line of 14 Buick models for 1923, including two new touring sedans of both the 4 and 6 cylinder types, incorporating many body and mechanical changes have been announced by Buick Motor Co., Flint, Mich.

The new models have all the former features of Buick dependability, with the valve-in-head motor, but also are so designed as to give added comfort in riding and greatly improve their appearance.

One of the greatest features of the new series is the spring suspension, which gives them extremely easy riding facilities over all roads. The rear spring hanger positions have been changed, practically doing away with all rebound and side sway and making the use of rear snubbers unnecessary. As an extra precaution against spring trouble the main leaf in the front springs has been made of vanadium steel.

In the 6 cylinder models, will continue the 5 and 7 passenger touring cars and a 2 passenger roadster. In the 6 cylinder line are also included the 3 passenger sport roadster, the 4 passenger sport touring, a 4 passenger coupe and a 7 passenger sedan, all in addition to the new 5 passenger touring sedan and the improved 5 passenger sedan.

In the 4 cylinder type there are five models which include the 2 passenger roadster, a 5 passenger touring car, a 3 passenger coupe, the 5 passenger sedan and the new 5 passenger touring sedan.

In all of the new 6 cylinder closed models the Buick engineers have built appearance, comfort and smooth running into the car, and every effort has been made to do away with noises so common to enclosed types. A new low body suspension has been achieved, together with a roof so constructed as to present a straight line view to the eye, and with a new noise-preventing covering.

The bodies of the closed cars are made of one-piece panels, eliminating joints and body noises. One of the distinct features of the new Buick is the window construction. Here the engineers have built window frames with a rounded edge, new round corner rear to side windows, and equipped them with anti-rattle catches which practically stop all noises and at the same time give a light-weight construction.

The doors are of an improved type and are equipped with a new type lock and rotary handles of nickel and black, easily operated, and special attention has been paid to the hinges, which are so designed that they insure even, easy operation at all times.

On all the closed models a clock has been installed and a metal covered sunshade is part of regular equipment, together with rear vision mirrors and a cowl ventilator, operated from the dash.

Special attention has been paid to the interior of the cars, and the seats are slung at a lower level, giving added comfort. The entire body is finished with a high-grade trimming material and includes new interior fittings.

On the 6 cylinder touring sedan standard equipment includes a rigid trunk rack and trunk with nickel guard rails on the rear of the bodies, and large, tilting front seats, insuring extreme comfort to all passengers.

In the building of the new bodies the hood line has been raised, giving the car a longer appearance, and new-design, one-piece, crowned fenders have been used throughout, together with drum headlights of improved type and drum parking lights on the cowl. An unusual effect is attained by the use of a lower top with weather-proof side curtains, including a special pocket for the driver to signal to traffic at will.

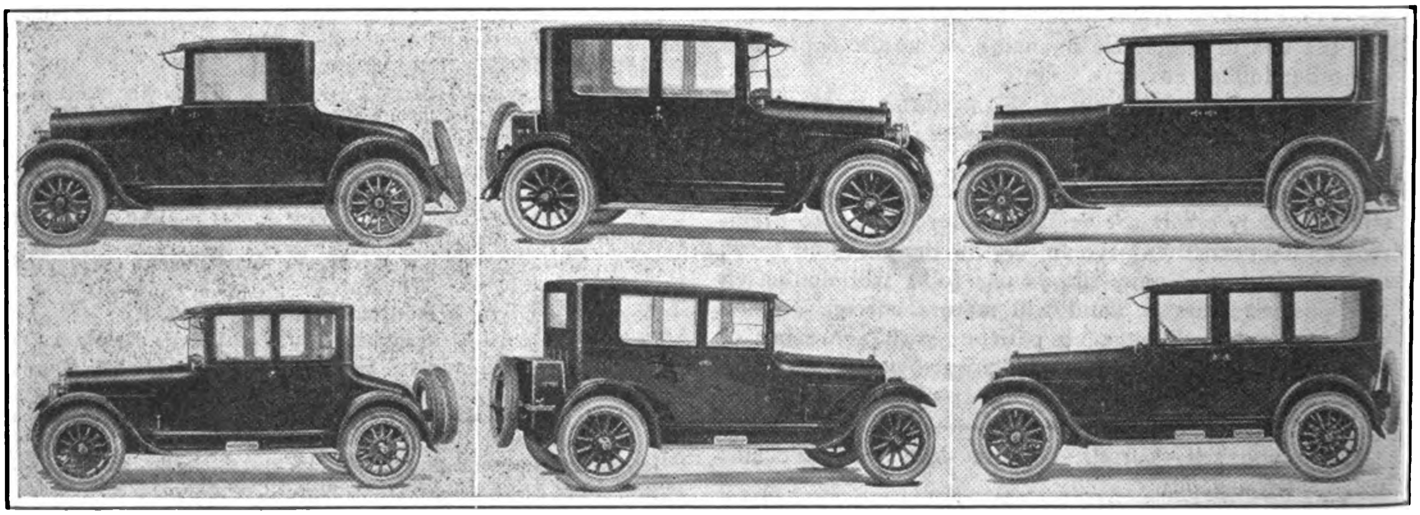
As a means of improving the looks and preserving the car's general appearance a nickel beading has been run around the radiator core on all 6 cylinder models, except the sport types, which have a nickeled radiator, and an entirely new radiator has been installed.

The seats have been slung lower to give added leg room and nickel foot rest brackets have been installed, while the steering wheel has been set at a new angle to give added comfort in driving.

On both running boards nickel scuff plates have been installed to protect the side aprons, and aluminum binding has been used throughout.

A cowl ventilator, operated from the instrument board, insures comfort in summer touring and does away with all engine heat in the front compartment.

To give the driver the utmost comfort the gear shifting lever is longer. There is a special windshield wiper of an improved design, and a set of switches under an extremely neat glass facing. An improved transmission lock also has been made part of the regular equipment, and will reduce theft insurance rates 20 per cent. Changes in the car have also altered Buick's standing in fire insurance and it has risen from class D to A, the highest rating ever given an automobile, and has been approved by the National Underwriter's Association. The wing nuts controlling the windshield also have been placed so that adjustments may be made from inside the car, and a new method of anchoring the windshield to the cowl through a heavy rubber washer has been adopted.



CLOSED MODELS IN 1923 BUICK LINE. ABOVE—LEFT, 23-4-36 3-PASSENGER COUPE; MIDDLE, 23-4-38 5-PASSENGER TOURING SEDAN; RIGHT, 23-4-37 5-PASSENGER SEDAN; BELOW—LEFT, 23-6-48 4-PASSENGER COUPE; MIDDLE, 23-6-41 5-PASSENGER TOURING SEDAN; RIGHT, 23-6-47 5-PASSENGER SEDAN.

Improved types of hood and door catches eliminate all rattles.

Mechanically the new series Buicks are built on the time-tried Buick principles of "dependability and stability," but many changes made are worthy of note. The motor has been cast on a higher block, semi-steel chilled when cast, and a new method of boring the cylinders tends to greatly improve the economic upkeep of the motor. Longer connecting rods and longer pistons, specially machined to prevent any scoring of the cylinder block, have been used, and this tends to give the motor added balance. A new and larger crankshaft has been used, together with connecting rod and main bearings of a special hard babbitt material.

The engineers also have installed an oil pressure feed system to the main bearings, and a new method of covered troughs to insure positive lubrication of the pistons at all speeds. New methods of lubricating the front camshaft bearing and valve stems have been adopted, as has an improved system of oil holes with sliding covers in rocker arm dust cover.

A new fan bracket bearing and pulley drive has been installed, together with a new system water pump shaft and pump packing.

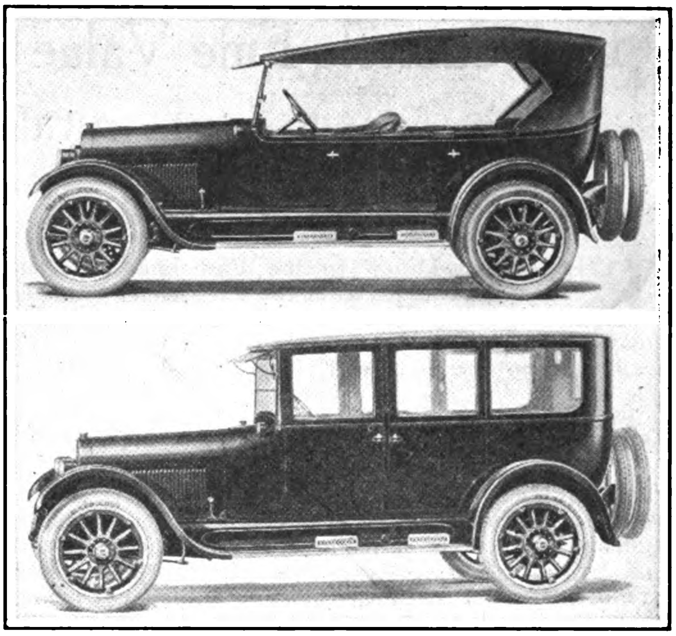
Heavy pillar brace irons and cross bars adding to the strength of the bodies, and a new method of attaching body brackets with bolts instead of screws has been used.

A heavier frame on the car has been adopted together with a new steering gear housing, steering knuckle, steering arm bushings, larger heat treated strut and truss rods.

On all of the 4 cylinder models many of the improvements listed in the sixes are used, and model 34 roadster has a longer body. These improvements, together with a special kick-up type of frame for the fours, tends to give them an ultra smart appearance and set them off at a lower angle.

The closed models of this construction have the same improvements as are used in the new six models, and they are refinished throughout with the latest fixtures and upholstery.

The equipment of the new 4 cylinder touring sedan will include a rigid trunk and trunk rack with nickel guard rails on the rear of the body, ventilating windows in doors and sides, a cowl ventilator operated from the instrument board, extra wide doors, large tilting front seats, dome lights, heater in floor, aluminum steering wheel spider, and the entire interior has been finished in plush of an attractive shade. The motive power is furnished by the Buick four motor.



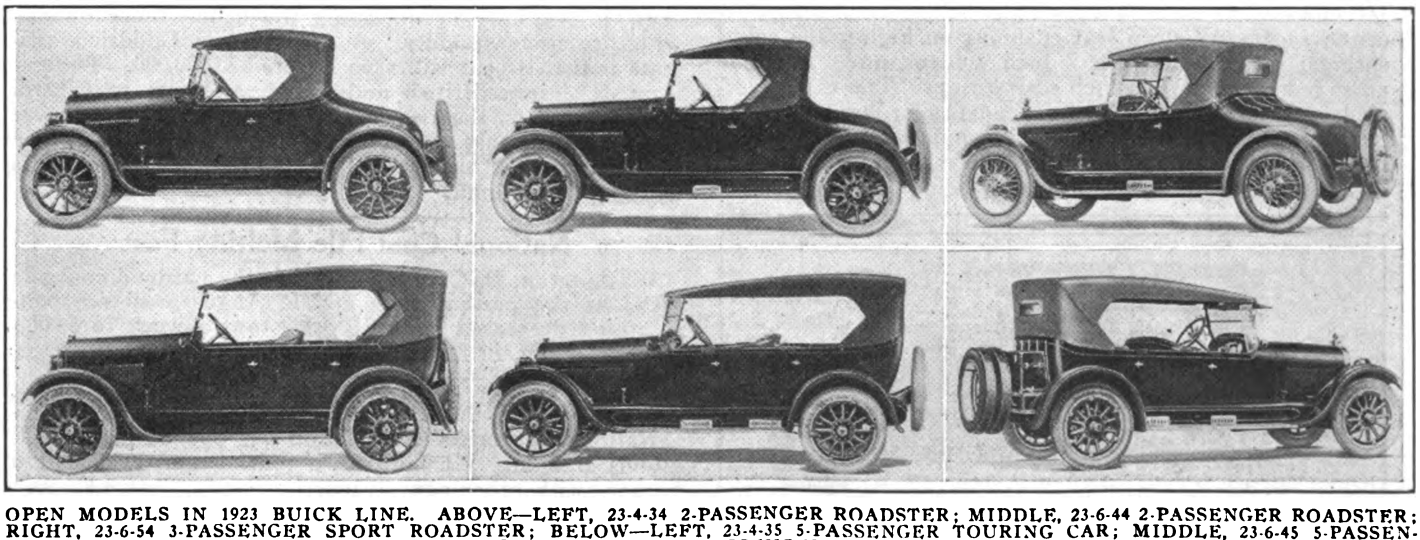
SEVEN-PASSENGER MODELS IN 1923 BUICK LINE. ABOVE, 23-6-49 TOURING; BELOW, 23-6-50 SEDAN.

New Steamer Lists at $1650 Chicago

American Steam Truck Co., Chicago, announces the American steamer 5 passenger phaeton or touring car at $1650 f.o.b. Chicago. It is stated to be in production now, with the factory "tooled up" for 300 per month, some demonstrators already delivered, and regular deliveries promised within 30 days. It is said to be the result of 20 years of experiment, and endorsed "by every automotive engineer of standing in America." Strong features claimed are foolproof burner and boiler, and extreme ease of motion. Low-grade fuels can be used. The water tube type of boiler is under the hood. Heavy real leather upholstery, gypsy-type top, bevel plate window in rear, steps instead of running boards, feature the equipment. The car's appearance is excellent.

New Automobile Cars Soon to Exceed 100,000

There are now 93,433 automobile cars in service. An additional 7498 box cars have doors from 7 to 8 feet in width and can be used for the smaller machines. On actual orders 12,950 new automobile cars are being built. Another 5600 automobile cars are included in tentative proposals for new equipment. Total box cars in service June 20, 1922, including automobile cars, 1,211,912. So said J. S. Marvin, manager of the N.A.C.C. traffic department, recently.



OPEN MODELS IN 1923 BUICK LINE. ABOVE—LEFT, 23-4-34 2-PASSENGER ROADSTER; MIDDLE, 23-6-44 2-PASSENGER ROADSTER; RIGHT, 23-6-54 3-PASSENGER SPORT ROADSTER; BELOW—LEFT, 23-4-35 5-PASSENGER TOURING CAR; MIDDLE, 23-6-45 5-PASSENGER TOURING; LEFT, 23-6-55 4-PASSENGER SPORT TOURING.

Earl Cabriole Fine Value

New Car Supplies Practically All the Brougham Does but Weighs Less and Price Is Only $1395

THE latest addition to the Earl line, called the Cabriole, patterned after the 4 passenger brougham and retaining practically all its refinements and comforts, weighs but 2780 pounds, and lists at only $1395 f.o.b. factory, due to careful planning and quantity production.

The motor car owner of today is the closed car buyer of tomorrow, is the theory used in forecasts and plans by Clarence A. Earl, president of Earl Motors, Inc., Jackson, Mich., and the Earl line always has included two very practical and popular closed models, the sedan and brougham. The latter has been an especial favorite, and Mr. Earl's foresight tells him there will be a splendid sale of the new car, which caters to and should increase the brougham-type demand. George S. Morrow, Earl distributor in New York City, says "the Earl engineers are to be congratulated on turning out such a beautiful and useful car at such a moderate price."

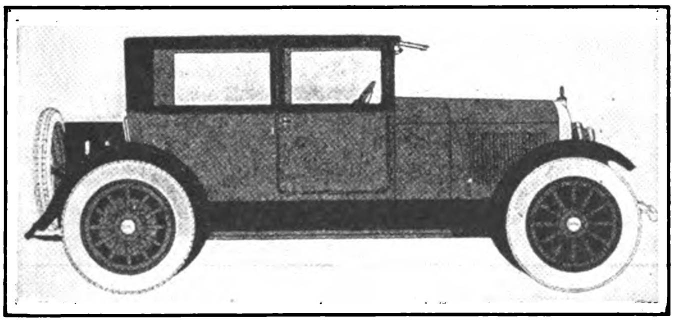
The latest Earl move accords with statistics. A few years ago closed cars were heavy, costly, confined mostly to town use, and in 1915 they were only 1½ per cent of total output; but in 1921 closed cars comprised 25 per cent of the total, because they are cool in summer and comfortable in cold or bad weather, a protection against dust; desirable on bad roads as well as good ones.

The Cabriole can be made airy, as the plate glass rear quarter windows can be lowered, and the door windows manipulated instantly. The Earl one-piece windshield, swinging in or out, gives ample ventilation and the specially designed visor protects from rain and sun. The new car has rich, gray genuine Spanish leather upholstery and interior finish; dome light; windshield wiper; complete set of tools. The black duratex fabric for rear tonneau top and sides is weather proof, cleaned easily and in smart contrast to the painted body panels. The special Earl blue body gives real distinction. Fenders and chassis are glossy black enameled.

A rear trunk platform is protected by maple slats in natural finish, and nickeled slat irons protect the rear body panel. A trunk, to contain two large suit cases and a hat box—great convenience for week-end trips—a Boyce motometer and front bumper, are special equipment, supplied for $50.

The Cabriole will go as far afield as any touring car. Its comfort is assured by ample body dimensions, low center of gravity, deep seat cushions on high grade spiral springs, firm frame with 7 inch side channels and five cross members, and 56 inch rear springs. The car's overall length is 13 feet 11 inches, and head room, 37 inches from seat cushion to top lining, is ample, though the car's height is only 6 feet 2 inches. There is ample leg room in the front tonneau, inside length being 53 inches.

For convenience in entering, the front seats tilt forward and the backs fold down. These seats facing forward means roominess not possible in the average 4 passenger coupe, with the driver's seat set forward and the small swinging seat at the right, facing the rear. The front seats themselves are 18 inches wide, 18 inches deep and 12 inches from the floor, with a comfortable 3 inch pitch. The rear seat, 45½ inches wide, will seat three persons without crowding. This cushion is 18 inches deep, 14 inches from the floor, with a pitch of 4 inches.



THE LATEST EARL CLOSED MODEL, THE CABRIOLE.

Grand Prix Record Is Broken

Last year's Grand Prix road race, distance a fraction under 500 miles, in Alsace-Lorraine, was won by Jimmie Murphy of San Francisco, California, U. S. A. This year's race, July 15, was won by Felix Nazarro, Fiat, Italy, in 6 hours 17 minutes 2 seconds, averaging 79.4 miles per hour, breaking Grand Prix and all other French records. Deviscava, in a French Bugatti, was second by almost an hour. Marco, Bugatti, was third.

The pace made men take chances. Two cars led Nazzaro into the homestretch, but both came to grief. Biaggo Nazzaro, Fiat, had passed Pietro Bordino, the third Fiat pilot, who had led to 53 laps and then had motor trouble. Biaggo was sure of second at moderate speed, but went after Bordino's lap record, 5 minutes 53 seconds, made in the 52d lap at 87.3 miles an hour. Biaggo's car turned turtle on the notorious Entzheim hairpin. He was killed, his mechanician was badly hurt. There were other accidents.

June Shipping Figures Pleasing

Shipping reports, 90 per cent complete, by factories to the National Automobile Chamber of Commerce, and by it announced July 13, indicated June shipments of 271,022 motor vehicles; an increase of 6 per cent over May and 51 per cent over June, 1921. June, 1921, showed a 9 per cent increase over May, 1921. The factory shipping figures, totaled by months in 1921 and 1922, follow:

	Carloads		Driveaways		Boat	
	1922	1921	1922	1921	1922	1921
January	15,357	6,485	7,479	3,185	143	93
February	19,636	9,986	10,173	7,507	180	99
March	27,753	16,287	16,917	9,939	560	75
April	31,334	20,187	22,381	14,197	2,960	1,619
May	34,324	18,608	28,760	15,193	7,366	2,381
June	*33,000	20,269	*30,500	18,834	*7,900	3,947

*June, 1922, partly estimated.

Goodrich Tire Prices Reduced

Nobody questions Goodrich quality. So the Goodrich reductions of 10 to 15 per cent on tires, July 20, may be regarded as a blow to the "gyps"—shoddy tires which, at "cut" prices, have been playing the deuce, more or less, with tire price stability. A conservative Goodrich estimate is that its cut will save buyers $50,000,000. The cut is made despite British and Dutch attempts to control rubber markets, the rise in cotton, the smallest holdover crop in years, only a normal prospective crop, a shortage among dealers, a big demand and with all its departments working to the limit.

National Coal Pile Melting Fast

Washington, D. C., news is that if the national coal pile melts at the present rate, middle August will see consumption decreased from 9,000,000 tons a week to 5,000,000—rationing, in fact.

N. M. A. Opens Washington Offices

National Motorists' Association has opened in the Edmonds Building, Washington, a touring and information bureau, with other conveniences.

August 1, Olds Motor Works, Lansing, Mich., made cuts ranging from $40 to $150, affecting 11 body types.

Free Camps on Lincoln Way

Association Compiles List from Data Obtained as Result of Many Tourists' Inquiries

THE number of tourists carrying camping equipment and making minimum use of hotels during their summer drives, is increasing yearly. Even many parties intending to stop at hotels carry camping equipment and enjoy making a camp now and then when facilities offer.

Lincoln Highway Association this year received an unusually large number of requests for information as to the location of specially equipped camp sites, with the result that the following data has been compiled. In general, of course, the tourist can make a camp almost anywhere between New York and San Francisco without interference from the owners of property, and many tourists like to make a separate private camp, well away from town or city. However, more and more communities each year are providing free camping grounds within their municipal limits, often elaborately equipped with facilities for the comfort and convenience of the tourist, and they are well patronized. Some of these camps often harbor as many as 2000 persons at a time, notably those in the West which are located at strategic points, such as the crossing of main routes.

In the following table no attempt is made to detail provisions made for the comfort and convenience of tourist campers at each point. This is unnecessary, as it will be understood that the elaborateness and completeness of camps vary with the population of the communities providing them. At all of the points listed, special grounds have been set aside for the free use of campers, convenient to the city itself, and tourists are welcome and treated with consideration. As new municipal camps are established along Lincoln Highway, revised lists will be announced bv the association.

Towns and cities on the Lincoln Way (New York to San Francisco, 3305 Miles) providing free municipal campgrounds for tourists, are as follows:

City	State	Population
Caledonia Park	Pennsylvania, State Camp between Gettysburg and Chambersburg.	
Ligonier	Indiana	2,000
LaPorte	"	(2 camps) 15,000
Dyer	"	500
Plainfield	Illinois	1,200
DeKalb	"	8,000
Aurora	"	40,000
Clinton	Iowa	25,000
DeWitt	"	2,000
Calamus	"	300
Clarence	"	700
Marion	"	4,500
Cedar Rapids	"	45,500
Belle Plaine	"	3,900
Tama	"	2,600
Marshalltown	"	16,000
Nevada	"	2.700
Ames	"	6,500
Boone	"	12,450
Grand Junction	"	1,500
Jefferson	"	4,000
Scranton	"	1,000
Dennison	"	3,600
Woodbine	"	1,600
Council Bluffs	"	36,000
Omaha	Nebraska	190.000
Fremont	"	10,000
Valley	"	800
North Bend	"	1,300
Schuyler	"	2,600
Columbus	"	5,500
Silver Creek	"	800
Clarks	"	1,000
Central City	Nebraska	2,500
Grand Island	"	14,000
Wood River	"	900
Gibbon	"	1,000
Elm Creek	"	750
Lexington	"	2.500
Cozad	"	2,000
Gothenburg	"	2,200
North Platte	"	10,500
Sutherland	"	700
Ogallala	"	1,500
Brule	"	200
Chappell	"	1,300
Lodgepole	"	500
Sidney	"	3,000
Potter	"	500
Dix	"	400
Kimball	"	2,000
Bushnell	"	400
Cheyenne	Wyoming	14,000
Laramie	"	6,500
Rock River	"	600
Medicine Bow	"	300
Fort Steele	"	200
Rock Springs	"	6,500
Green River	"	2,200
Fort Bridger	"	100
Evanston	"	3,500
Coalville	Utah	1,000
Salt Lake City	"	118,000
Tooele	"	3,600
Ely	Nevada	2,100
Fallon	"	2,000
Reno	"	13,000
Carson City	"	1,700
Placerville	California	3,000
Sacramento	"	66,000
Stockton	"	43,000
Tracy	"	3,000
Haywards	"	3,500
Dutch Flat	"	50
Auburn	"	2,300

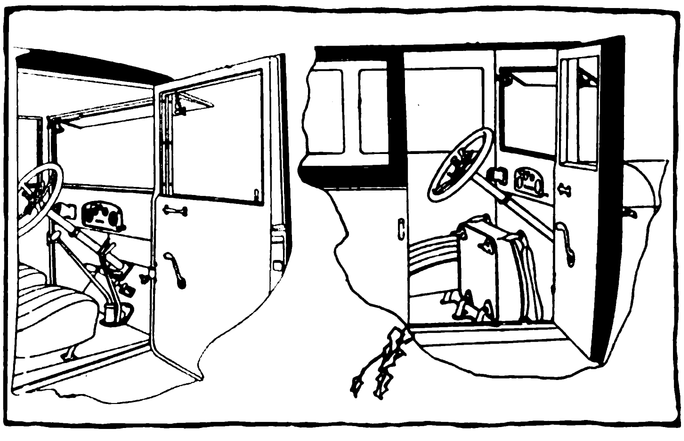
Dorris Prices Are Reduced

Reductions in price, ranging from $815 to $1440, or an average of $1127, are announced by Dorris Motor Car Co., St. Louis. The new price range is from $3950 for the 4 passenger tourist and 7 passenger touring to $5750 for the 7 passenger sedan.

On the two former the reduction is $835; the price of the 4 passenger coupe is lowered $815 to $4985; the 7 passenger sedan is reduced by $1440, to $5750.

A new production and sales policy also is announced. The production schedule has been greatly increased, and W. A. Chapman, lately with the St. Louis Car Co., who has been appointed director of sales, is to inaugurate the most vigorous selling campaign in the company's history. An extensive advertising campaign has been started in the automotive trade journals, and other advertising campaigns are contemplated.

Signs of the times—a merger here and there.



EASY TO GET INTO OR OUT OF THE EARL CABRIOLE.

Rips "Gas" Prices Up Back

Federal Trade Commission's Request that Dealers' National Body Do Some Probing Is Obeyed

By C. A. VANE,
General Manager National Automobile Dealers' Association.

COMPARATIVE costs of gasoline for the last twelve months in 28 representative cities indicate a mere juggling of prices, according to investigation by the National Automobile Dealers' Association, on request of the Federal Trade Commission. Copies of information in the hands of the association also have been forwarded to Senator La Follette, of Wisconsin, and Senator McKellar, of Tennessee, who have called for an investigation in the Senate.

Prices of gasoline at service stations have risen 2 to 7 cents. Some cities show sharp decreases in one month and equally sharp increases the following months. In only one city was there any indication of a price based upon competition, that being Dallas, Tex. There gasoline dropped as low as 14 cents in September, 1921, while other cities were paying from 18 to 28, but in June this year the competition evidently seems to have been overcome, as gasoline in Dallas went to 25 cents and now remains at that figure.

Some of the most important cities in which marked increases have been shown are Kansas City, from 17.7 cents in July, 1921, to 24.5 in July, 1922; Detroit, 20.9 in July, 1921, to 26.4 in July, 1922; St. Louis, from 19.7 to 25.5; New Orleans, 20.5 to 27.5; Jacksonville, 20 to 26. New Orleans, in the heart of the oil country, is paying 27.5 cents a gallon, Boston, several thousand miles away, is paying 28 cents.

There seems to be a pretty general movement among gasoline producers to force the price to 30 cents a gallon everywhere before the automobile touring season is over. Recent press dispatches indicate that the oil men are in general accord on "suggestions" that gasoline should be 2 or 3 cents higher. They are basing these assertions upon claims that production costs have increased so as to make manufacture unprofitable.

Gasoline prices for July, 1921, averaged about 22.25 cents for the country as against 26.45 cents for July this year. This is nearly a 20 per cent increase. The manufacturers of automobiles, on the other hand, have steadily lowered the cost of their product to their consumers and it appears on the surface that there must be something fundamentally wrong with the oil industry if it cannot readjust its production costs to fit general conditions, in which all other business has reduced its costs.

It is true that during the war prices generally were agreed upon that would give the "weak sisters" in many industries, including the oil industry, the lowest at which they could produce; and then the Government relied upon the excess profits tax to take away from the careful manufacturer who kept his costs to the bone, the difference he realized between his costs and the minimum at which the "subsidized" manufacturer could produce profitably.

The oil industry apparently wants to prolong the war forever. Here in the end of the fourth year of peace we find it clamoring for a return to a system that is condemned by all economists and had as its only justification the fact that it was a war measure.

Twelve million motorists, who consume on an average of about 400 gallons a year each, would like to have some assurance that there really is competition in the oil business, or knowledge as to whether the so-called "trust" and the so-called "independents" are not merely backdoor and frontdoor names for the interests controlling a very necessary commodity in American life.

A table of month-to-month prices compiled by the association, showing the fluctuations appears on this page.

Flint, Name of New Durant Six

The addition of a popular priced 6 cylinder car to the Durant line is announced. The new car, named the Flint, is to be ready for public inspection about September 15, and for delivery January 1. The price is to be $1180. The manufacturing company, Flint Motor Co., will have a capitalization of $5,000,000. The car is named for the city of Flint, Mich., where the main manufacturing plant will be located. Thus is fulfilled a promise made by Mr. Durant at the inception of Durant Motors, Inc., a year and a half ago, in response to a petition signed by thousands of his former townspeople. For convenience in supplying the Eastern market the Flint will also be manufactured at Long Island City, N. Y., in the plant about to be vacated by Durant Motor Co. of New York, Inc.

The latest Durant product is a refinement of the so called Chrysler car, which was acquired in the purchase of the Elizabeth, N. J., plant of the Willys Corp. As redesigned, the car will be somewhat larger than the original Chrysler model but will retain the seven-bearing crankshaft, and other special features. It is said to be a matter of record that in the designing and engineering work on the Chrysler over $2,000,000 was expended.

Full Speed Ahead, A. M. I. Policy

Representatives of all the automobile and parts manufacturers included in Associated Motor Industries met at the first directors' meeting, held in Chicago July 18. Future meetings will be at the corporation's office in Dayton, Ohio. The central organization has been practically completed, and is now directing all operations in the merger from the head offices in Dayton. Full capacity production of the National, Jackson and Dixie Flyer automobiles, now manufactured by the companies merged in Associated Industries, has been decided on definitely. The merger also will push to capacity production on National, Jackson Four Wheel Drive, Old Hickory and Traffic trucks.

RETAIL GASOLINE PRICES—JULY, 1921 to JULY, 1922, INCLUSIVE.

	1921						1922						
District	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Boston	26	27	27	27	28	30	30	29	26	26	27	28	28
Philadelphia	26	25	24	24	27	28	28	26	26	26	28	29	29
Newark	24	24	24	23	26	27	27	26	25	25	27	28	28
Baltimore	23.5	23.5	23	22	25	26	25	24	24	24	26	27	28
Charleston	25	25	25	23	26	27	26	25	25	23	26	27	28
Chicago	20	20	19	19	20	21.5	21.5	21.5	21.5	21.5	23	24	24
Detroit	20.9	18.9	18.9	18.9	20	22.4	22.2	22.2	22.2	23.2	24.2	25.4	26.4
Milwaukee	20.3	20.3	20.3	20.3	20.3	23.2	23.2	21.9	21	22.9	23.9	24.7	25.7
Des Moines	20.6	20.6	20.6	20.6	20.6	22.2	22.2	22.1	22.1	23.4	24.4	25.4	26.4
Indianapolis	20.6	18.4	18.6	18.6	20	22.1	22.1	21.8	21.8	22.8	23.8	24.8	25.8
Kansas City, Mo.	17.7	17.7	17.6	16.7	16.7	19.2	19.2	19.2	20.2	22.1	22.2	23.5	24.5
St. Louis	19.7	19.7	19.7	19.7	19.7	21.2	21.2	21.2	22.2	23.2	23.2	24.5	25.5
Cleveland	21.5	21	21	21	22	23	23	23	23	23	24	25	25
Cincinnati	21.5	21	21	21	22	23	23	23	23	23	24	25	25
Youngstown	21.5	21	21	21	22	23	23	23	23	23	24	25	25
Little Rock	21.5	21.5	19	20	20	25	23	22	22	22	20	25	26
Galveston	18	15	18	20	21	23	23	22	22	22	21	25	25
Dallas	18	18	14	20	21	21	18	18	21	22	21	25	25
New Orleans	20.5	19.5	18.5	18.5	20.5	24.5	24.5	22.5	22.5	22.5	24.5	27.5	27.5
Louisville	20	19	19	19	21	23	24	23	23	23	24	26	26
Atlanta	21	20	23	22	24	27	26	25	25	25	27	29	29
Jacksonville	20	19	21	22.5	22	25	24	23	23	23	23	25	26
Denver	23	23	23	23	23	24.5	23	23	23	23	25	27	28
Salt Lake	29	26	26	26	26	26.5	26.5	26.5	26.5	26.5	28.5	30	31
Cheyenne	23	23	23	23	......	......	23	23	23	23	24	26	26
Seattle	26	26	24	24	25	25	25	25	25	25	25	25	25
Los Angeles	30	30	28	30	29	29	29	29	29	29	29	29	29
Spokane	25	23	23	23	23	23	23	23	23	23	23	23	23

Lem Loosehead says: I see where several cities is agreed to lie their durndest fer a coupla highways through their states that er not highways at all. Schemes like that don't ketch a sucker after th' fust time. Give 'em real service er tell 'em where t' git it, is the only way.

Means Vast Gasoline Saving

Knox Method to Treble the Percentage from Crude Oil and Almost as Much from Residue

LAST year a Motor West man was shown in Los Angeles, by a man of high reputation as an oil technologist, gasoline which he sad was 60 per cent of the crude oil from which it had been extracted. His great expectations were not realized, probably for lack of financial backing. Money is the scariest thing in the world.

Now comes William J. Knox, who long was associated with George Westinghouse (who was laughed at for claiming air—mere "wind"—could brake railway cars). Mr. Knox has the Knox "cyclic cracking process" for making gasoline. It is claimed this means a new era of automotive usefulness, comfort and economy, by nearly trebling the percentage of gasoline from crude oil, and by converting 60 to 75 per cent of the heavy residue—fuel oil—into less volatile gasoline, as good as the 33 per cent now obtained by the prevalent Burton process.

The foregoing, and more, was told by H. M. Crane, of the Society of Automotive Engineers, at the recent annual meeting of the American Petroleum Institute.

It appears that not much detail of the Knox process is available yet, but that a company has been formed to use it. By this process, distillation of gasoline begins at a much lower end point—last boiling point. It begins at 150 degrees Fahrenheit, as aviation gasoline does, and ends at about 350 degrees, compared with the present 420 to 500 degrees. The difference not only is economical as to production cost, but "staggeringly" so, as to the alleged facts that high-end-point gasoline wastes 30 per cent of the fuel used in the average motor car, and causes secondary explosions or knocks, and increases quantity of lubricating oil needed, and lessens the life of engine parts.

It appears that present gasoline distillation involves much waste by burning or carbonization, an amount of oil equaling that of the gasoline obtained being broken down into tar; also, much loss of time in removing carbon and tar. Also, owing to great demand, gasoline now has to be "extended" by the heavier napthas and some parts of the kerosene. Also, because fuel oil has to be sold much cheaper than the cost of crude oil itself, the burden of price to yield the refiners their obviously handsome profit is loaded onto gasoline users. Residue or fuel oil, in 1921, totaled practically twice the quantity of gasoline, yet sold for only one-third as much. The Knox process is expected to revolutionize this situation.

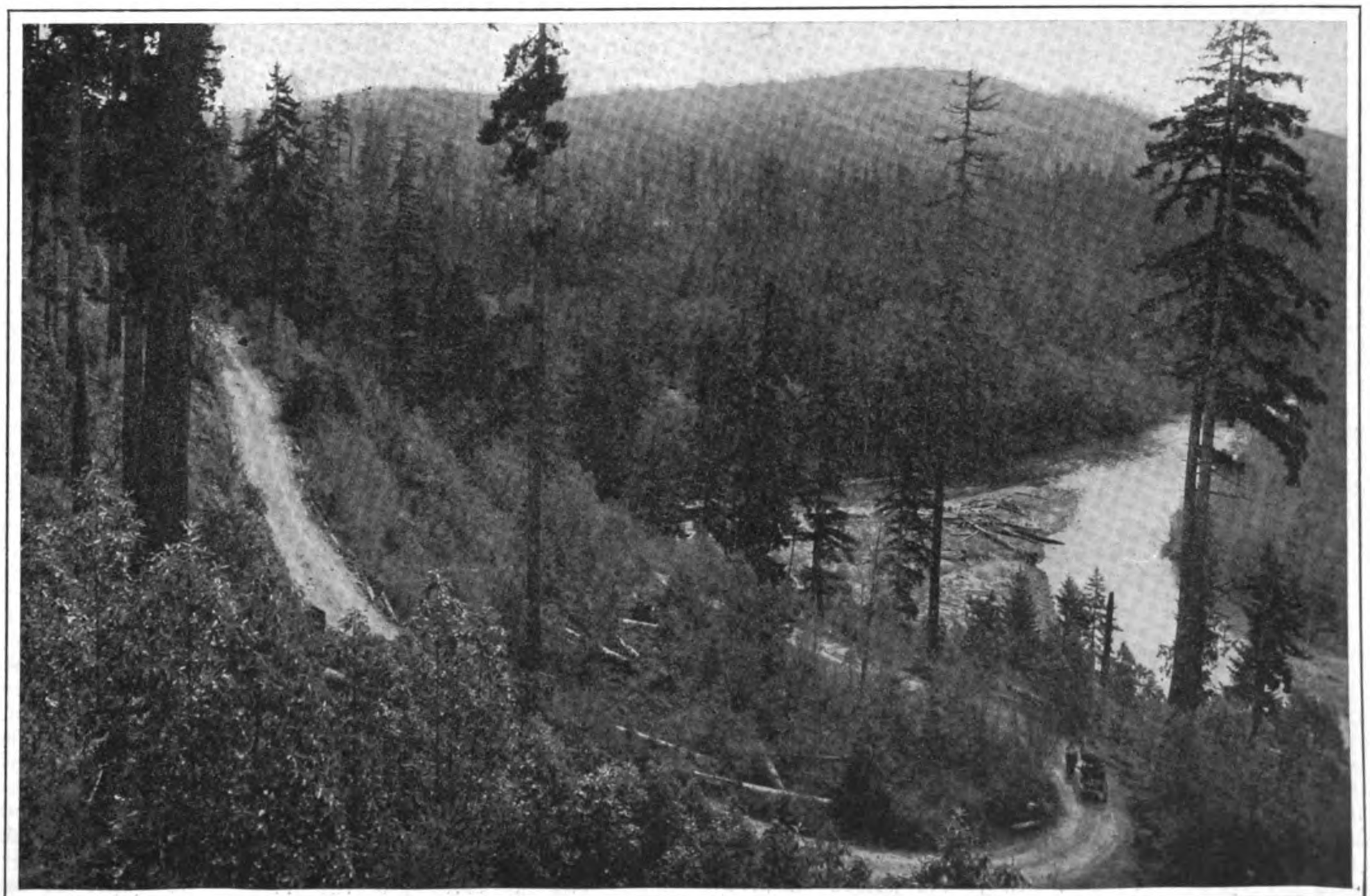
Industrial Motors Advertising Plan

The recently organized Industrial Motors Corp. announces United States Advertising Corp., Toledo, O., as its advertising counsel.

The first two units in the merger are Selden Truck Corp., Rochester, N. Y., and Atlas Truck Corp., York, Pa. Other important units are to be acquired soon. The purpose is, economies in purchasing, production, merchandising and distribution, that will offer distinct advantages to consumers and increase dealer profits.

A comprehensive campaign in business papers, to be followed by national publicity, will comprise the immediate advertising program.

In Columbus, Ind., July 1 to September 1, "dark" motion picture houses except Fridays and Saturdays. Reason—automobiles take patrons out into the country on warm nights.



CHARMING VISTA ENCOUNTERED ALONG THE FAMOUS OLYMPIC HIGHWAY, AMID SWIFT MOUNTAIN STREAMS.

Fewer Stolen Cars Returned

Four-Year Theft Record in 28 Cities Shows Few Decreases and Large Non-Recovery Increase

By C. A. VANE,
General Manager National Automobile Dealers' Association, Headquarters St. Louis.

A TABULATION of motor vehicle thefts, recoveries and non-recoveries in 28 index cities shows that 21 of every 100 stolen in 1918; 26 of every 100 in 1919; 29 of every 100 in 1920; 40 of every 100 in 1921, were not recovered.

The fact that twice as many were unrecovered in 1921 as in 1918 indicates that the thieves are keeping very well ahead of police and legislative efforts to protect owners.

In 1921, New York headed the list as to thefts, with Chicago a close second. Chicago recoveries, however, exceeded New York's considerably. In 21 cities more cars were stolen in 1921 than in 1920. Cleveland, Portland, Ore., Seattle, Salt Lake City, Columbus, York, Pa., and Richmond, Va., showed fewer thefts in 1921 than in 1920.

The worst handicap under which the police are laboring in the recovery of stolen vehicles is lax enforcement of laws to punish motor vehicle thieves. Courts are unduly lenient with this class of offenders. Charges against such lawbreakers are continued until the patience of witnesses is exhausted, resulting finally in dismissals and nolle prosequis.

A tendency was also noted, during the 1921 depression, for owners of insured vehicles to conspire for the disappearance of the vehicles so as to collect insurance. Numerous cities reported the recovery of motor cars from quarries, pits and rivers, that had been reported stolen and which the police declare were disposed of, with the connivance of the owners.

The detailed four-year record of thefts in the 28 cities is shown in the accompanying table:

	Stolen				Recovered			
	1918	1919	1920	1921	1918	1919	1920	1921
New York	3340	5527	5179	6808	2578	3124	2717	3451
Chicago	2611	4447	5974	6799	1954	3447	4340	4438
Detroit	2639	3481	3300	3732	1934	2529	2563	2410
Cleveland	2076	2338	2649	2304	1816	1786	1765	1532
Los Angeles	1629	1688	1654	2333	1499	1365	1152	1725
Kansas City	1144	1661	801	1577	606	794	341	1153
Portland, Ore.	1088	1528	465	338	990	1378	418	303
Denver	901	1440	858	1862	627	1187	651	1711
San Francisco	1122	1354	1186	1652	1082	1304	1156	1608
St. Louis	2241	1241	788	1560	1354	944	641	1247
Seattle	1451	1422	1008	861	1376	1398	900	710
Indianapolis	404	1031	1152	1238	334	692	833	979
Boston	866	1002	480	490	607	530	297	216
Salt Lake City	797	776	592	516	790	758	555	482
Oakland, Cal.	895	760	564	729	860	733	549	680
Omaha, Nebr.	1039	734	634	927	669	567	507	855
Columbus, O.	451	550	513	408	352	373	278	355
Cincinnati, O.	348	520	525	741	291	293	273	445
Oklahoma City	571	149	205	493	484	70	133	396
Albany, N. Y.	41	133	87	234	29	104	70	177
Buffalo, N. Y.	1262	986	743	1152	914	700	507	928
Newport, R. I.	4	9	12	14	4	9	12	14
York, Pa.	6	10	8	2	6	9	8	2
Grand Rapids, Mich	152	189	262	267	149	137	250	207
Richmond, Va.	84	207	148	130	62	161	93	100
Dayton, O.	207	228	198	227	241	213	217	243
Lowell, Mass.	26	25	18	36	16	17	7	31
Evansville, Ind.	50	72	43	124	49	68	40	119
Totals	27,445	33,508	30,046	37,554	21,673	24,740	21,273	26,517
Per Cent Unrecovered	21	26	29	40				

Interesting Gasoline Situation

Nothing mysterious about gasoline prices, said a Standard Oil official in Chicago, July 20, the day after a 2 cent cut occurred—the second cut in July. The first one, July 1, he said was due to the freight rate reduction; the second, to 23 cents at service stations, was due to 25 cents per barrel drop in crude, July 15, and another on July 18. Any further gasoline price reduction by his company, he said, would depend upon similar or other economic factors, the benefits of which always are passed on to the ultimate consumer. One other possible factor, he intimated, was competitors. "We do not expect the price to go lower unless our competitors care to cut theirs."

In the same interesting Chicago Tribune report it was stated that the one explanation so far published, as to why during several months up to July the price of gasoline kept on rising, was that "there is now little or no demand for the by-products of crude oil, and that having to waste these kept the crude oil market climbing and consequently advanced the gasoline market." In other words, somebody had to pay the refiners' profit. Naturally. But those who do the selling do not say that; and the poor puzzled public as naturally is influenced by such chronological coincidences—referring to the Chicago cut of July 19—as the Washington news of July 13, of the Federal Trade Commission's charge of a "monopolistic situation."

In the middle of July, Standard Oil cut crude 25 cents a barrel in California, making the reduction 75 cents in 18 months; but gasoline has dropped only 4 cents in the same period, perhaps because demand for gasoline grows so fast—26,000,000 gallons were withdrawn from California reserves in June.

News from Washington, D. C., July 15, from the Bureau of Mines, tells of 892,267,766 gallons of gasoline on hand, or 38,000,000 more than previous record of April 1. On the other hand, news from New York, July 22, from the American Petroleum Institute, that reserves constantly are decreasing despite huge production—12,239,975 barrels of motor fuel refined in May, beating previous record, of September, 1920, by 1,000,000 barrels; yet in May 849,084 barrels had to be taken from reserves. The Bureau of Mines says domestic gasoline consumption in May was 499,242,343 gallons, having been exceeded only by August, 1921; and domestic and export use in May totaled 556,424,509 gallons, exceeding April, 1922, by 110,958,718 gallons, and May, 1921, by 161,122,173 gallons.

Though withdrawals of gasoline from reserves are huge, California crude oil is being produced in such volume that a glut impends, is a growing belief. Too many new wells, it is said—68 in June—to keep the market "stabilized." Storage limit is being taxed. Standard Oil reported, July 17, that all California oil companies produced in June a volume averaging 355,274 barrels a day. In May average production was 2102 barrels more per day. June shipments averaged 307,415 barrels a day. 22,505 more than in May. Despite less production and more shipment in June, stocks were increased 1,455,776 barrels in the month.

Pyrene's Part in Subway Disaster

Pyrene fire extinguishers, well known in the automotive industries and made by Pyrene Mfg. Co., Newark, N. J., have put out hundreds of fires in New York subways in the past ten years, and have established a fine record on electrical fire risks. There are more than 3,000,000 in use. They save millions of dolars' worth of property, and hundreds of lives, yearly; and they played a vital part in that respect in the recent New York subway horror, when an electrical burn-out caused a panic, increased by the fumes it caused. For purely political reasons, it is said, Mayor Hyland blamed Pyrene for the fumes. His attitude was scoffed at. A Herald editorial was headed "The Mayor Flounders."

Anahuac, Look Out for Henry!

Anahuac means "Old Mexico," and is the name of the so-called national motor car of Mexico, a 4 cylinder car pictured in Motor West, April 15. It was designed in Indianapolis and was to be made in Mexico City by Mexicans, for Mexicans, backed by Mexican capital and protected by contemplated tariff against imported cars.

Now comes news that official Washington is informed that Ford representatives have been offered free land, freedom from taxes for at least 15 years, and "any other assistance," at Saltillo, in the state of Coahuila, for an assembly plant.

Points in Anti-Price Plea

Details of a Statement Said to Have Been Written By Coast Jobber and Which Was Tabled

BRIEF reference was made, in Motor West's report of the Automotive Equipment Association convention in Colorado Springs, to an unsigned plea, said to have been written by a Pacific Coast jobber, that manufacturers cease naming retail prices of specific articles, in their advertising. Several exceptions to statements in the plea were made at the convention, and it was tabled unanimously.

The plea was that manufacturers advertise the range of their retail prices, if it seems desirable, but that naming retail prices on specific products increases dealers' local difficulties, among which are "gyp" dealers, who cut in on advertised prices.

This and other competition, the plea points out, eliminates danger of loyal dealers seeking undue profit, while being tied to certain prices increases danger of jobbers and dealers not subsisting profitably, by shackling their ability to meet competition.

The deflation in prices in 1921 was estimated at as much as 25 per cent in the automobile accessory business, with corresponding decline in sales volume, and with overhead expenses, including transportation, not reduced proportionately, the combination affecting profits very unfavorably and, in consequence, bringing retribution upon manufacturers. The plea was not, apparently, that jobbers and dealers be enabled to raise prices, by manufacturers not advertising specific figures, but that they be trusted to handle competition in their various fields in such way as to benefit their chosen manufacturers and themselves.

The existing situation, the statement claimed, is not in the consumer's interest, either, as it affects unfavorably the service he receives.

"It is assumed that the manufacturer is distributing his product with only a living profit and that competition restrains him from asking unfair prices. Nationally advertising the price he fixed to the consumer, however, puts both the jobber and the retailer, so to speak, in a straightjacket and makes it impossible, under present abnormal conditions, for either to make a living profit on his wares. If the jobber should lower the dealer's discount in order to raise his own profit to a living figure, he simply would aggravate the present unsatisfactory position of the dealer and make it still less possible for the dealer, as such, to live. If the dealer should raise his price to the consumer above the nationally advertised price, the dealer would lose the confidence of his customer, who would look upon him as a profiteer. The outcome of it all is likely to be that jobber and dealer will strive to switch their business to competing lines, not nationally advertised. This, in turn, would react against such manufacturers and largely kill the value of their publicity.

"A case in point is that of the Douglas shoe, formerly advertised at certain fixed prices to consumers. The dealers found the margin of profit allowed them by Douglas was inadequate, and gradually they dropped his line for other lines equally meritorious, which, not being advertised by the manufacturer at fixed prices, afforded the dealer a living profit. The situation so seriously affected the business of Douglas that he wisely changed his publicity policy. He continued nationally to advertise his shoes, but instead of advertising certain fixed prices for certain shoes he advertised his range of prices for his line, leaving it to the dealer to fix his own prices on individual styles, with the result that many dealers have reinstated the Douglas shoe in their stock, and it is believed that Douglas now has a larger output than ever."

The statement submitted a list of national advertisers, in and out of automotive industries, that do not name retail prices nor quote any prices, leaving that to jobbers and retailers.

The Colorado Springs convention, in tabling the matter, did not indicate any main reason for doing so, but a guess is that it was considered the abnormal condition claimed in the plea had passed and that no emergency exists.

Pay Special Taxes, Avoid Penalty

Forms for making returns on special taxes, due in July under the Revenue act of 1921, are available at branches of the Internal Revenue Bureau. Returns and tax payments not made by July 31 involve penalty. Among many others, returns must be made on the capital stock of corporations. Persons operating or renting passenger automobiles for hire must pay $10 for each car seating more than two, up to seven, and $20 per car seating more than seven.

Showing Vogue of California Top

Westcott Motor Car Co., Springfield, O., after an investigation among 5000 car owners, found a considerable majority prefer closed cars but not the price. Less than 5 per cent give the old collapsible top either first or second choice. The latter is overwhelmingly for the California type of permanent top and winter enclosure. The Westcott Co. claims to be the first to make that type standard on open models.

"Gimme Some Gas Mister"

A NEW CUSTOMER.

I'm waiting for the man to bring
That funny hose of his
'N' fill my car with gasoline
So I can make her whizz.

My kiddy kar can run away
From that of Willy Jones,
'N' when I get the gas I'll race
Him for the ice cream cones!

He says he's got a "Super Six"
Or sumpin' of the kind—
But when I get the gas I'll leave
Him forty miles behind!

—Delphia Phillips.

U. S. Leads in Automotive Exports

The United States leads the world in the export of motor vehicles—40 per cent was its share in 1921. Ten per cent more was exported from factory branches in Canada, and the bulk of the 25 per cent exports from France were re-exported U. S. war vehicles. Nine per cent of this business was done by Italy, 7 per cent by Germany and 4 per cent by England.

Maybe the new N.M.A. will hurt the A.A.A., maybe not.

IN FOREIGN FIELDS

Germany's March and April Exports

March exports of automotive products from Germany totaled 972 (including dirigibles), being an increase of 288 over February, says Commercial Attache Herring in a recent dispatch to the Department of Commerce. April exports, totaling 493 passenger cars and 271 trucks, show a slight decrease from March. Of the April exports the Netherlands took 102 passenger cars and 72 trucks; Belgium, 59 passenger cars and 44 trucks; Denmark, 44 passenger cars; Spain, 41 trucks, Sweden, 31 passenger cars; and other countries, 257 passenger cars and 106 trucks. According to German official statistics for the first quarter of 1922, 226 passenger cars were imported, 189 of which came from Austria, 2 from the United States and 35 from other countries.

English Factory Lockout Settled

Advices to the Department of Commerce indicate considerable business will be lost for this season by the British motor industry because of the 11 week engineering lockout which ended in June by acceptance of the employers' proposals by the labor unions. Manufacturers say many prospective purchasers have withheld their orders for the year and that other large orders have gone to makers in the United States, Italy, and Germany. Certain makers are well stocked with chassis. The Rolls-Royce and several other large plants were forced to shut down in early May. A few non-federated firms turned out more cars during the lockout than ever before in their history.

Canadian Automotive Exports Increase

May exports of automotive products from Canada reached the total of $1,728,302, an increase of 15.1 per cent over April. The total of 2562 passenger cars exported, at a value of $1,498,276, was an increase of 10.4 per cent in number and 10.3 per cent in value over April. There were 251 trucks exported, valued at $112,156, an increase of 160 per cent in number and 169 per cent in value, while the $117,870 worth of parts exported marked a gain of 16.8 per cent.

The principal markets for Canadian automotive products are about the same as in April and previous months. Australia was the largest importer in all three classes.

New Motorcycle Factory in England

Motorcycles have a different status abroad than here. The Raleigh Cycle Co.'s new factory at Lenton, Eng., built at a cost of $1,250,000, was opened recently by the British Minister of Mines, according to a report from Consul Hitch, Nottingham. The complete factory is said to be the largest in the country and will have a maximum annual capacity of 10,000 motorcycles, 50,000 countershaft gears for motorcycles and 100,000 gear cases, in addition to 100,000 bicycles and 250,000 3 speed gears for bicycles. Something like 5000 people will be employed in the complete factory when running at full time. About 2000 are employed now.

Horses Outnumbered in Shanghai

Motor vehicles in Shanghai number 2500, more than three times the total of horses, according to the Shanghai Sunday Times. Coolie-drawn rikishas, however, are the most popular type of equipage, totaling 16,000.

Eight Hundred Motor Cars in Persia

It is estimated from local data, by the Consul at Teheran, that there are 812 motor vehicles in all Persia, 283 of which are in the city of Teheran. Most of the remainder are in the various larger cities. This number is a large increase from the last registration, taken in March, 1920, when there were but 40 passenger cars and 4 trucks in all Persia. The British, in their withdrawal from Persia during 1921, disposed of a large number of Fords and perhaps half a dozen trucks at auction. These cars were nearly all in a bad state of disrepair and it is doubtful if they will be in service for more than a year.

French Motor Trade Becoming Normal

The French automobile industry has passed the severe period of the general industrial crisis and gradually is getting back to its normal state, according to Baron Petiet, president of the Syndicate of Automobile Manufacturers. The Renault Co. was reorganized recently as a limited liability company, Societe des Usines Renault, with a capital of 80,000,000 francs. The Berliet, the Brasier, and the Peugeot companies all reported operation losses for the year 1921. The cost of gasoline has decreased from 16 francs per 5 liter can in 1919 to 8.50 francs at the present time in Paris, and 7.35 francs outside of Paris.

Havana Is a City of Taxicabs

The total number of motor vehicles in Cuba is 19,689 passenger cars and trucks, according to an estimate made by Acting Commercial Attache Jones, from figures given out by the various dealers. Havana is a "city of taxicabs," as is shown by the fact that there are 5686 taxicabs and 3775 private cars. In addition there are about 2923 motor trucks and 30 trailers. Only a small number of the cars in Cuba are located outside of the cities, owing to the poor roads in the country. Traffic conditions are congested a good deal of the time, due to the narrow streets in the cities and large number of taxicabs.

Canada's Motor Vehicle Registration

Vice Consul Horace M. Sanford, Ottawa, states that according to official figures for 1921, issued through the Department of Railways and Canals, 48,000 more motor vehicles were registered in Canada in 1921 than in 1920, the total, 463,848, representing an average of one vehicle for every 19 persons. Revenues from registration amounted to $7,669,493, practically all of which was expended for road improvements.

Truck Prospects at Antung, China

The Chinese authorities of Antung, China, plan to build a 6 mile motor road to Santaolangtou, the seaport of Antung, for the purpose of bringing cargo up to the city without lighters. When this road is completed a small demand for motor trucks is certain to arise, according to a report from Vice Consul Lasseter. There are no dealers in motor vehicles in the Antung district.

Singapore Bans Left Side Drive

Singapore has banned cars having the driver's seat on the left. An order recently received in Los Angeles from the Singapore government was that only cars so equipped that were registered prior to December 31, 1921, will be permitted in Straits Settlement. Such cars must be fitted with a mechanical device to indicate the intention of the driver to turn to the right.

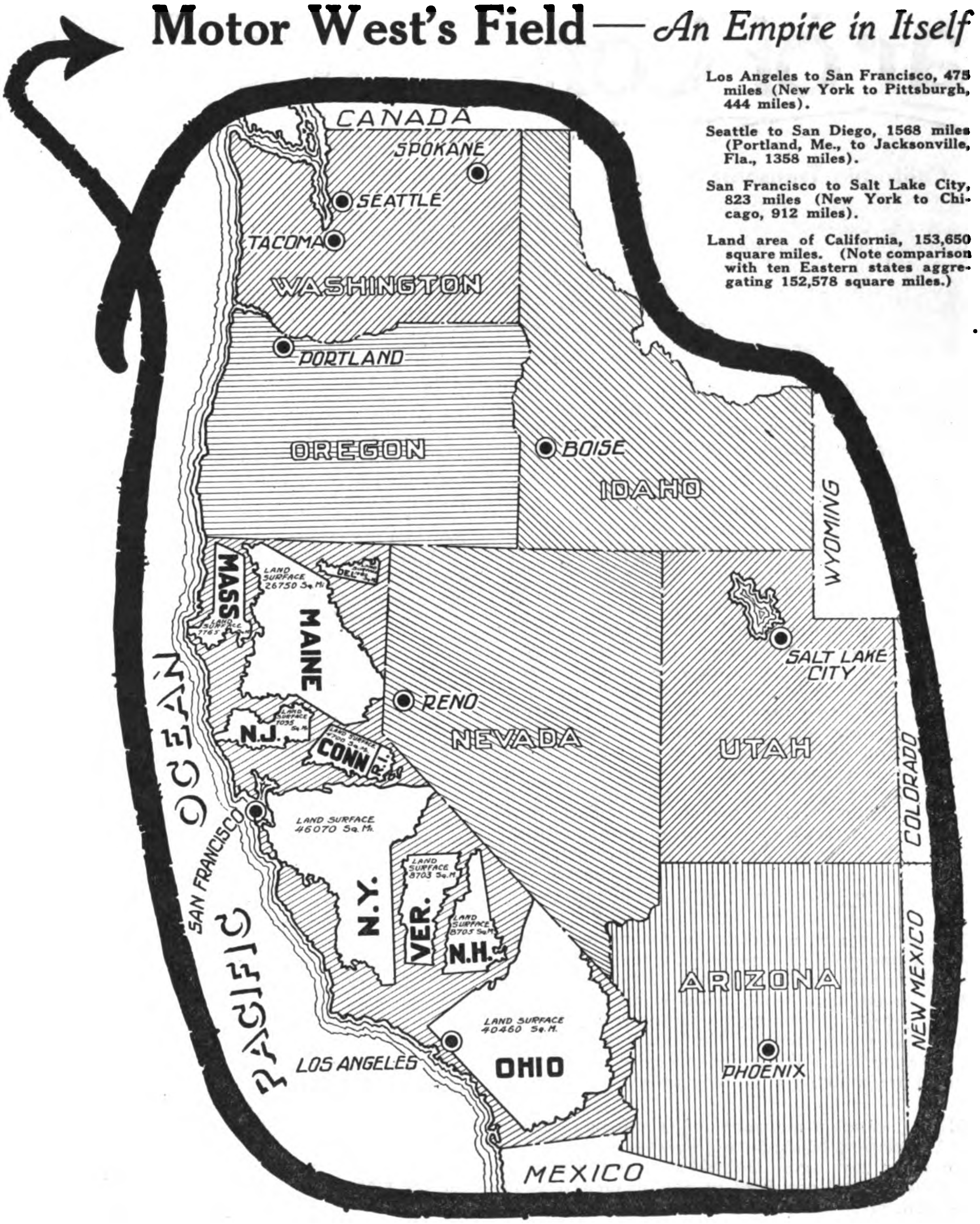
Trailers Not Much Used in France

The use of trailers is as yet undeveloped in France, and no statistics as to their number have been collected, says Commercial Attache Huntington. French mililtary authorities placed large orders for trailers near the end of the war, but when the war soon ended these were left on the hands of manufacturers and have not yet been disposed of.

Registration of Cars in Portugal in 1921

Commercial Attache Cunningham, Madrid, states unofficial returns show the estimated 1921 registration of motor vehicles in Portugal were 10,000 passenger cars, 600 trucks and 5000 motorcycles.

Motor West's Field — *An Empire in Itself*


CANADA
SPOKANE
SEATTLE
TACOMA
WASHINGTON
PORTLAND
OREGON
BOISE
IDAHO
WYOMING
MASS
LAND SURFACE 7765 Sq. Mi.
LAND SURFACE 26750 Sq. Mi
DEL.
MAINE
LAND SURFACE 7035 Sq. Mi.
N.J.
LAND SURFACE 4700 Sq. Mi.
CONN
R.I.
RENO
NEVADA
SALT LAKE CITY
UTAH
COLORADO
SAN FRANCISCO
LAND SURFACE 46070 Sq. Mi.
N.Y.
LAND SURFACE 8703 Sq. M.
VER.
LAND SURFACE 8705 Sq. M.
N.H.
LAND SURFACE 40460 Sq. M.
OHIO
LOS ANGELES
ARIZONA
PHOENIX
NEW MEXICO
MEXICO
PACIFIC OCEAN

Los Angeles to San Francisco, 475 miles (New York to Pittsburgh, 444 miles).

Seattle to San Diego, 1568 miles (Portland, Me., to Jacksonville, Fla., 1358 miles).

San Francisco to Salt Lake City, 823 miles (New York to Chicago, 912 miles).

Land area of California, 153,650 square miles. (Note comparison with ten Eastern states aggregating 152,578 square miles.)

Motor West's field takes one-sixth of the product of the automobile and accessory factories of the United States. On the other hand it produces the great bulk of some of the foods and other commodities consumed by the rest of the country. In industrial production, note its ten-year increase in number of factories—86 per cent; in factory hands—97 per cent; in annual factory production—187 per cent. What Eastern plants do not adequately supply it, it soon will supply itself. Its raw materials, such as cotton, hides, etc., are as near to its manufacturing centers as those in the East are to factories there. Climate favors it, too—the Mare Island navy yard near San Francisco produces 25 per cent more than other navy yards, for the same labor cost. Living conditions are ideal, unemployment less, slums unknown, power is plentiful. The water power resources of 11 Far Western states total 42,850,000 horsepower; of the rest of the country, only 20,640,000. The installed capacity of these 11 Far Western states has only begun—in 1920 it was only 2,515,000 horsepower, of which California supplied 1,228,000; the Pacific Northwest 585,000; Intermountain and Southwest states 702,000; but by 1930 the total installed capacity of the region will be 5,352,000 horsepower. California's plans alone, for the decade, call for expending $500,000,000. To see the region's possibilities, consider that even 100,000 horsepower will run 1300 factories producing $140,000,000 in goods annually, and will serve also for very much more than that in irrigation, transportation and lighting.

The Car of Commerce

California Transport Situation

THERE have been long-persistent efforts, by the managers of California's two large automobile clubs, to foster belief that the state's state highways are in deplorable condition. This belief has been engendered, and has been heightened by the information that in the next 5 years $65,000,000, an average of $13,000,000 a year, will be needed in addition to all that has been provided, to keep the system in proper condition.

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Whatever the faults of the state highway commission may be, anyone taking a trip over those routes that are most heavily used, and which might be expected to be in the deplorable state indicated, would be most agreeably surprised.

Nevertheless the impression that those roads are bad has taken root; and the tremendous sum of additional highway funds stated to be necessary undoubtedly is making it take root more deeply; and as to how those funds are to be raised involves principles and procedure of deep economic concern not only in California but everywhere.

Extra taxation of motor vehicles, it is argued, is the logical thing to be done, though on the whole, so far—with exceptions, of course, as always—it is true that if motor vehicle owners, particularly of trucks, were paid subsidies instead of being taxed at all, ultimate consumers of things to wear, eat, etc., actually would be the gainers. Not good logic to try to square with existing opinion; merely an economic fact.

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Extra taxing of motor vehicle owners, particularly those operating stages and trucks, is supported enthusiastically by railway men. They would apply what is meant by "soc et tu um," to motor transport, which competes with them though it also helps feed them.

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Though quite unsound economically, but quite logically in accord with the political and other factors that exist, it is proposed that not the large majority of motor vehicle owners, but the minority who in the business of motor transport serve most as prosperity producers, shall be the goat which shall yield most of the additional highway funds that are needed. What follows tells what motor transport men are thinking and doing about it.

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Fred Mott, secretary-manager of California Motor Transport Association, headquarters Fresno, visited Motor West office a few days ago. He said that at the meeting called by F. R. Fageol and held in San Francisco about two weeks ago, attendance was widely representative of motor transport interests, and that with three exceptions those present pledged themselves to support, financially and morally, a program of legislative action to be handled through a committee.

One of the three exceptions, Mr. Mott said, was Major Tilden, head of the San Francisco local of the state draymen's association, who did not agree to any taxation plan that would make his members, operating only in San Francisco, pay the same as others throughout the state. J. A. Stoner, representing the Mack truck, prefers the present state law permitting a 30,000 pound weight limit for trucks. Mr. Mott explained he would have to submit the program to his directors, but fully expected them to agree.

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California Motor Transport Association already has a platform, which was discussed at the meeting and which is for a 24,000 pound limit. Truck Owners' Association of Southern California also is for that limit, plus, however, a "leeway" of 2000 pounds—in other words, 26,000 pounds.

California State Draymen's Association has not yet announced a platform. An editorial in the July issue of Western Drayman and Warehouseman, its official organ, urges it to wake up, in this respect.

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Mr. Mott explains the legislative attitude of California Motor Transport Association by quoting its platform, the first plank of which says it seeks an economic solution of the problems of highway cost and maintenance and motor transportation—two subjects intimately related and causing a situation in which motor transport interests are being hammered hard by others, and concerning which the public is not being informed correctly.

"Our platform," said Mr. Mott, "is the basis for amendments to the motor vehicle act. This is what we urge:

"A uniform state vehicle law, instead of the present conglomeration of county ordinances, controlling weight, tire and other operating conditions, as well as a uniform tax, and the classification of existing highways throughout the state.

"The state highway commission, and those charged with maintaining roads, to have police powers to enforce such laws.

"A 24,000 pound weight limit for a 4 wheeled truck and load; 32,000 pounds for 6 wheeled vehicles with three axles; 42,000 pounds for gross weight of a truck, 4 wheeled trailer and load.

"An increase of not more than 100 per cent in license tax on motor trucks, in lieu of any other motor vehicle tax—meaning local taxes; an additional tax of not more than 100 per cent, above the tax on trucks, for those operating as common carriers, and enjoying a special privilege; and an increase of not more than 10 per cent in the tax on passenger motor vehicles.

"Incorporation in the law of measures for proper lighting, signaling devices and trailer connections.

"A penalty clause making a jail sentence obligatory for habitual offenders.

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"The present conglomeration of weight and other regulations not only is an intolerable situation socially, but financially it means a vast annual waste. We work for our dollars—why throw them away by the million, by having the present chaos? Of the 58 counties in the state, 30 have ordinances. In 21, the weight limit is 20,000 pounds or less; in five it is 22,000; in four it is 24,000. The others use the state limit, 30,000 pounds. You will find that adjoining counties do not agree, and the counties still control the bridges. Along the state highway goes a load of 30,000 pounds, say. It reaches a bridge, controlled by the county, and bearing a sign reading, 'Total gross weight permitted on this bridge, 3 tons'—that is, only 6000 pounds! Orange County's highway limit is 22,000 pounds, but recently it passed another ordinance providing that if at any time its supervisors declare a highway unfit for heavy traffic, that road is closed automatically to all vehicle weights exceeding 15,000 pounds. Such examples show the ridiculous situation. This sort of thing knocks commerce into a cocked hat. It has not been attended to. We are here to do the job—to get the important fundamentals straightened out.

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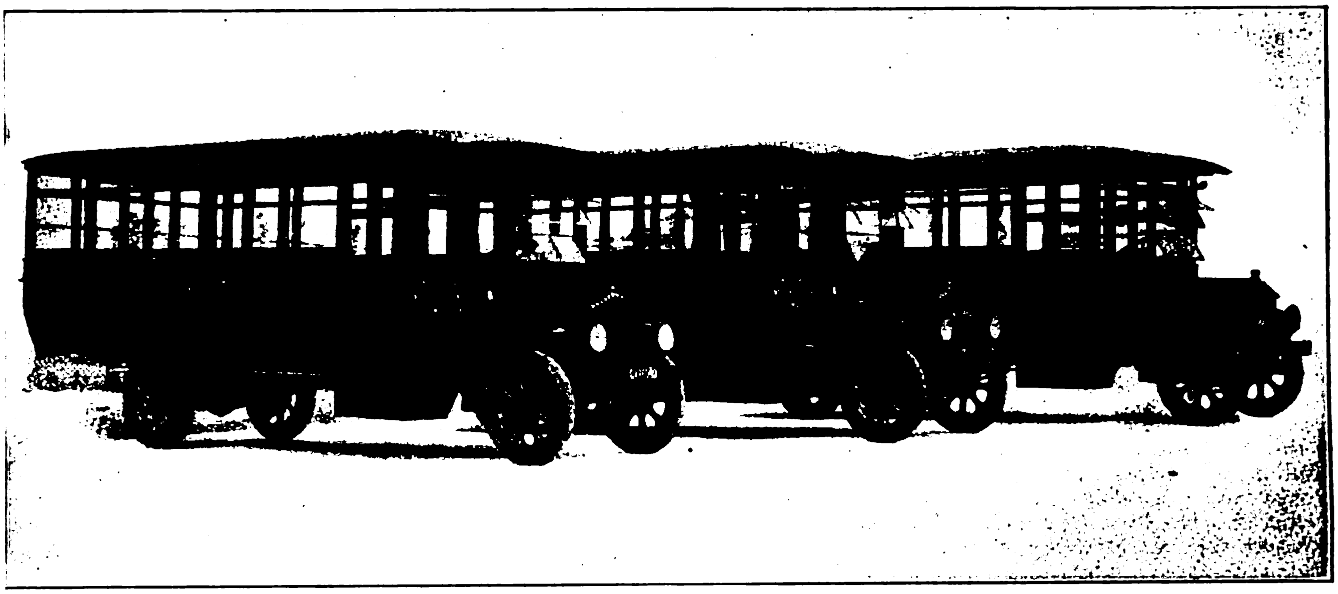
"Why do we stand for a 24,000 pound limit? General en-



GARFORD

are selling a great many of their two-ton trucks equipped with the new type of Smith Cushion Wheel. Many different bus lines now have their Garford busses equipped with them. All trucks need the new type of Smith Cushion Wheel just as much as the automobile needs the pneumatic.

Garford has used for years the rigid type of Smith Wheel as standard equipment on their 3½, 5 and 7½ ton trucks.

The Garford Motor Truck Company recognize the quality and value of Smith Cushion Wheels.

Pacific Coast Representatives: A. H. Coates Co., 770 Mission St., San Francisco, California

SMITH WHEEL
SYRACUSE N.Y. U.S.A.

gineering opinion is that that is right, if highways are not to be destroyed. That is one reason. Mr. Fletcher, engineer of the state highway commission, and Mr. Lippincott, engineer for Automobile Club of Southern California, say 26,000 pounds is safe for the present state highway construction, but we must consider county roads also. The present 30,000 pound limit is an economic crime. Everybody conversant with the circumstances knows how that was put through the last legislature. It was not done in the interest of the public, nor is it really benefitting those who did it. It was done when the legislators had nothing so much in mind as to get through and get home.

"That brings me to our other very good reason for wanting a 24,000 pound limit. From a truck operating standpoint, a 5 ton unit is the most economical, which 7½ to 10 ton units, it has been proved, are not. The fact is, there is no 5 ton truck made which, loaded with 5 tons, weighs as much as 24,000 pounds. Of 20 makes of trucks, each loaded with 5 tons, each of eight of them weighed more than 22,000 pounds; twelve weighed 800 to 900 pounds less than that. In this test, a desire was expressed to make the limit 22,000 pounds, but that would shut off eight makes of trucks, and the others were so close to 22,000 pounds that that limit could not be enforced, as under some circumstances they might weigh several hundred pounds excess; but 24,000 pounds will permit any 5 ton truck to carry 5 tons and give margin enough to make the law enforcible.

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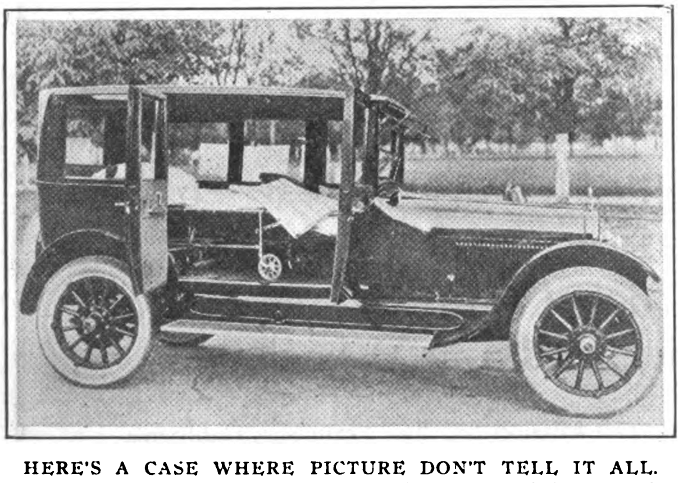
"I mean a real 5 ton truck. The average 5 ton truck, equipped for the road, weighs 11,000 pounds. One so-called 5 ton truck, however, weighs 13,000 pounds. It is not, and should not be claimed to be, a 5 ton truck.

"A prevalent method of announcing truck weights is wrong. They take the catalog shipping weight of the chassis. Chassis always weigh 500 to 600 pounds more than catalog weight. By the time they are equipped for the road—body and all—they exceed catalog weight considerably.

"There is no reason to advocate 26,000 pounds except a desire to overload—a desire not based on sound economic reasoning. This is a case where it will pay better to be fair.

"It happens to be hard to be fair, for certain truck makers who for various reasons have added features to their trucks which have increased the weight. I know one so-called 5 ton truck that is as big as any other 7 tonner. Certain so-called 2 ton trucks will carry 2 tons up in the mountains, but will carry 5 tons down on the plains. A certain 5 tonner can carry so much that its gross weight can be 28,000 pounds; but as I have said, it is not really a 5 ton truck, and should not be called that.



HERE'S A CASE WHERE PICTURE DON'T TELL IT ALL.

The picture shows only one of three ways in which an Oklahoma undertaker uses a Buick sedan—as an ambulance. It is usable also as a combination hearse and pallbearers' coach, and when the stretcher is removed there is almost nothing to indicate the car differs from other Buick sedans devoted to personal use only. The front seat is divided, with hinges on the back of the right cushion, to lower it, and the right front door post was made removable, with clamp screws similar to the attachments on some of the older Buick closed car models. The job was done locally, at small cost.

"Some makers don't rate their trucks. They ask a man what he wants to use a truck for, and sell him a truck for that use. They have not pyramided like certain others; and it is these certain others that oppose a 24,000 pound limit—notably one. Why? Well, he has to get more for his so-called 5 ton truck than others do, because it really is more than a 5 ton truck; and he has got to tell the buyer to carry more, to make the increased purchase price profitable. The thing for this maker to do is to start all over, and not repeat his pyramiding; instead of, as he is, wanting the present 30,000 pound limit to remain, or battling against the public-interest effort to put the limit below 26,000 pounds.

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"At the recent San Francisco meeting, Senator Morris said any effort to have a limit of more than 24,000 pounds agreed to in the next legislature will be absurd, and that getting even that limit will be hard work.

"A limit of 24,000 pounds would not accommodate a maker who labels as 5 ton trucks those which exceed 5 tons, but it would be a safe limit for him if he would quit pyramiding and start over right; and it would be quite reasonable for all others.

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"Now as to increasing taxes. Motor West's contention, for a ton-mile basis for trucks and buses, and a gasoline-consumption basis for private passenger cars, has not been considered. The line of least resistance is on present conditions, which include horsepower rating—and, as to trucks, weight—and prevailing public thought. More money must be raised. How? The inevitable answer is, from motor vehicles. The 750,000 passenger car owners in the state are in the majority among motor vehicle operators. To try to increase their taxation much would be a failure. I speak candidly—the big burden must be put on the owners of the 42,000 trucks. By increasing passenger car license tax 10 per cent, and truck license tax 100 per cent, plus 100 per cent for common-carrier trucks, the needed revenue would be raised."

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Mr. Mott also wanted to tell why California Motor Transport Association was organized, late last year, when California State Draymen's Association already had been long in existence.

He regretted, he said, that this was not made clear at the beginning. If it had been, he said, the present development of the new association would have been reached several months ago. When told that although Motor West has about 12,000 readers in the seven Pacific region states, as well as in the East, his statement should be made also through the nearly 200 California newspapers to which his association's publicity (hitherto of rather general character) is sent, he appeared to agree.

"We are not opposing the other association," said Mr. Mott, "and we are not criticizing it, as some of its officers, and its official organ, are criticizing us. I have received letters of regret, from men prominent in business which that journal represents, as to its attitude.

"California Motor Transport Association was formed to tackle neglected fundamentals; to do what had not been done before, though there had been plenty of opportunity to do it. Many details of the business of motor transport are being attended to excellently by various local bodies, but in the state as a whole, the fundamentals have not had proper attention. To rectify these is the purpose of our body; and I make the point that, no matter to what other organization related to motor transport in California a man belongs, he also should be a member of ours, for the sake of his pocketbook if for no other reason.

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"We all agree that 'many a nickel makes a muckle.' A little unnecessary cost here, and a little there, make up a tremendous annual total. How much of such wastage there has been, and is, affecting motor transport, has not been figured closely, but it is known to be a great deal, and the waste does not benefit anybody's pocketbook. It really is waste, produced by time lost in red tape, conflicting county ordinances, damage to roads and vehicles through overspeeding quite as much as overloading, and efforts to evade hard facts so as to make sales which actually cause loss eventually to truck buyers if not to sellers, and certainly to the public.

"A couple of years ago the situation began to be apparent. It crystallized into action in Fresno, where, late last year, this association was organized. Mr. Mitchell, a leading Fresno banker, and others including myself—I was selling trucks there—had had experiences in which the effect of the chaotic regulation of motor transport in the state, on commerce, obviously was bad. It became clear that there is a lack of correct understanding between the public, the authorities, railway and motor transport men. A huge economic loss to all concerned was evident.

"It would take a book to go into this thoroughly—the great expense that the present chaotic condition of certain fundamentals is causing us all, collectively. I can only indicate it here.

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"Assume—quite safely, I believe—that as a result of unnecessary road damage, quibbling and evasion due to conflicting county weight and speed ordinances, and so on, there was a waste last year of 10 per cent of the sum paid in the state for truck hire. The sum paid was $29,000,000, and 10 per cent of that is $2,900,000. I say that that is worth saving, and it is only a part of what can be saved. Because certain fundamentals are all mixed up, it is not saved; nobody gets it so he can feel it swell his pocketbook. Practically it is sheer waste—and the general public, meaning all of us, must suffer for it. We could do a lot of useful things with those millions of dollars.

"Because a man does not get hit in the face, so to speak, by this waste, he is likely to be ignorantly careless about it. I had a rather hard time convincing a brick manufacturer of the situation, and that he ought to get behind what we are doing. He said he only owned two or three little trucks—it didn't matter much to him. But I showed him it does matter, to him and to the ultimate consumer who, after all, has got to pay for his bricks, for which he, the brick maker, does not net a bit more than he would if the waste were eliminated on the $30,000 a year he pays for truck hire. Multiply his case by thousands, in various lines of commerce, to get what I mean.

—

"So our body was formed, and several of us in Fresno contributed to a $10,000 fund to get publicity and other factors started; and we have not received it back yet. Mr. Lowney, the Fresno attorney who sends out our publicity, which is being printed very generously, is paid for his work, of course; but not an officer of the association receives a cent of salary except myself.

"I did not want my position. By circumstances, and the pressure of Mr. Mitchell and others willing to cooperate, but who lacked full knowledge of motor transport matters, I was forced into it. Right here I will admit that now I see great possibilities for myself, more money in my pocket than by selling trucks, if our organization gets the support, through membership, that it deserves not only from men not now members of any motor transport body but from those who already are members of any such body. We can do for motor transport interests all that is done for passenger car interests by the automobile clubs. We can save them millions of dollars a year, if they will be with and of us. I now see a good future in it for myself, if we do get such support, because I see what is happening in the automobile clubs. One has more than 30,000 members and the other has more than 63,000. In our body, every member has a vote, and an interest in any property value the body may acquire, though it is a non-stock, non-profit organization.

"There are some 42,000 motor trucks in California. Our association now has about 1700 members, who pay an average of $14.50 a year. We have more than 500 in Los Angeles, and I am glad to say more than 50 per cent of these are members of the draymen's body also.

"Let me make it very clear that our association was formed to deal with fundamentals; with the motor transport problem as a volume proposition—a volume expressible in dollars in very large figures; with a situation which had been neglected by all others, and in dealing with which I believe it would be best for all concerned to get behind us instead of, as the draymen's official organ does, knock our effort to benefit them. Still, I will be glad if that association will at least adopt a definite platform to the same end. It has not done so yet.

—

"We have made a most valuable connection with J. C. Veenhuyzen, statistician of the Los Angeles County Road Department, and have access to a remarkable compilation of motor transport records collected by Goodyear Tire & Rubber Co. of California. This gives us a great fund of data.

"It is necessary to have an association like ours. Each of the locals forming the California State Draymen's Association has its specific problems. So has the California Warehousemen's Association. So has the Motor Carriers' Association. Among them there are differences of interests, hence loss of combined power. The men doing local hauling and those doing long-distance hauling differ, naturally, on certain competitive matters. So do the truck-for-hire men and others. What we are after is the fundamentals, that affect us all."

—

Mr Mott is a large, jovial, forceful, logical, clear-speaking person; a man of organizing ability, apparently; and apparently also a good executive, fit to tackle big game. He has had more than a dozen years of experience in marketing motor trucks. Last year he was doing that, in Fresno; had the contact with Banker Mitchell and others, already stated; and he acts like a man who has a strong grasp of what he has undertaken and who discovered, after taking hold somewhat reluctantly, that he not only liked the job for the results possible to obtain for the public and motor transport commerce, but for himself; a stimulating combination.

Jump On R. R. Commission Move

In the last issue was mentioned a movement sponsored by the California Real Estate Association, in convention. It is to have the state railroad commission control, which now includes long distance motor transport companies, take in even for-hire vehicles. The idea also is to empower the commission to grant perpetual franchises to electric or motor transport lines.

Both ideas are receiving strong objection. Of the first part it is said it would deprive local authorities of needed rights; would prevent drivers of single trucks from going one way and returning another, in the service of the public; would diminish their number and encourage monopoly; and so on. Of the second part it is said it would give electric lines undeserved "protection" against motor transport competition, which is meeting developments needs the electric lines failed to serve.

The alleged statement of the president of the real estate men's body, that bankers should support the proposed initiative measure, arouses especial ire among truck men, who say that but for widespread use of trucks both real estate men and bankers would not be as prosperous as they are.

Truck makers and sellers, naturally, are right at the firing line, against the proposed concentration of power.

Truck Men's Lure—"Do You Belong?"

The bi-weekly meetings of Truck Owners' Association of Southern California, in its Los Angeles club rooms, are of real benefit to those who attend, though tired, these very busy days. Real results are reported to them by Phil Jacobson, secretary-manager, who works day and night. Information of much pocketbook value is imparted by worth-while speakers. "Do you belong?" has been urged as member-getting propaganda, for all to use when talking to for-hire or other truck owners, personally or by phone. Just the query, every time—nothing more. A mere wink to the wise, as it were.

Tractor Department

Farm Loan System Perverted

SUIT has been begun by the Brentwood, California, unit of the new National Union Farm Loan Association, to test the constitutionality of the joker in the Federal Farm Loan System law passed five years ago, by which permanent organization of the 12 farm land banks, with farmer representation, has been delayed during the five years and probably will be for 16 years more if the situation is not changed. The suit consists of mandamus proceedings to compel organization of the Berkeley Land Bank in accordance with the farm loan law. If the suit fails, the fight will be taken into Congress; in fact members already are receiving letters from units of the new National Union, protesting against what is stated to be a betrayal of the co-operative principle in the law.

From the facts in a Dearborn Independent article, the conclusion is obvious that relief from the present conditions would do much to stimulate agriculture, hence the tractor industry.

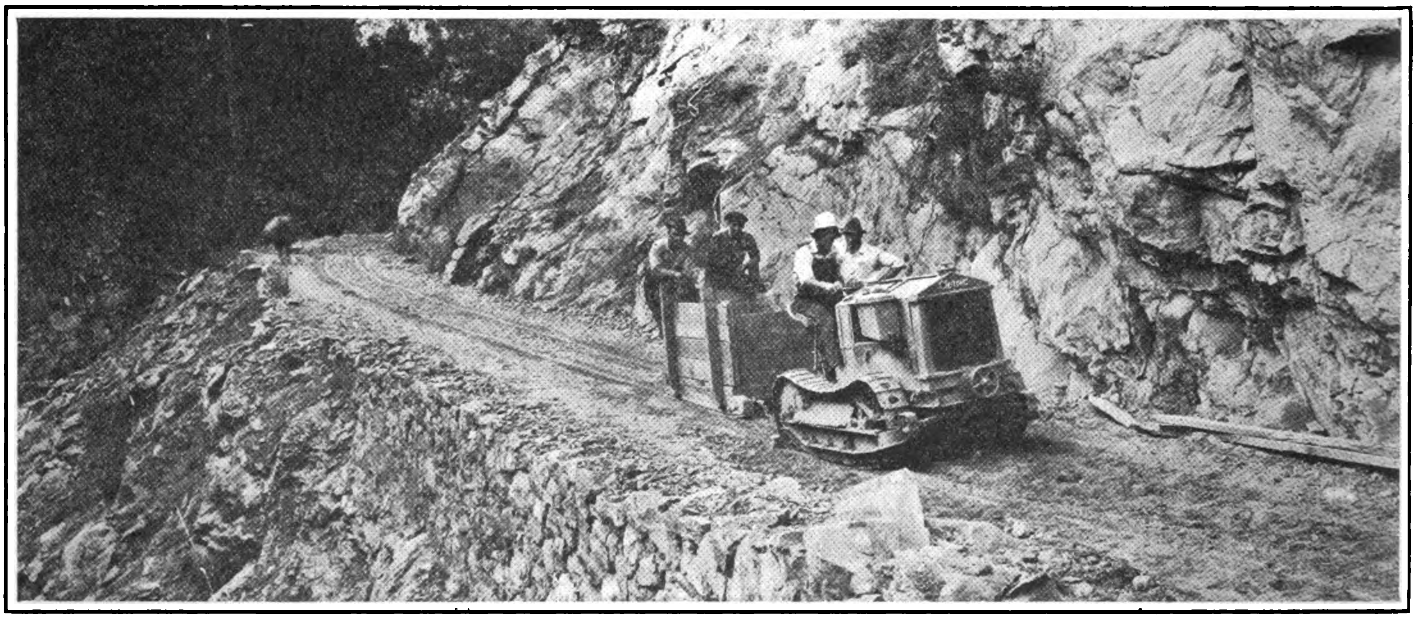
The purpose of the law was to give farmers, like manufacturers, long-time investment opportunity, and to let them name six of the nine members of the board of each of the land banks after subscribing for $100,000 worth of its stock. All of the 12 banks qualified for that right long ago—the farmers have invested more than $30,000,000 in the stocks of the banks; yet there is not even one stockholder on any of the bank boards.

The joker appears to be in the fact that in 1918 the Treasury Department, to prevent farm loan bonds competing with Government bonds, obtained Congress' authority to buy $200,000,000 worth of the former, with the proviso that the present bureau, not stockholders (farmers), control the farm land banks while the Treasury holds any of the bonds. The bonds do not mature till 1938. Meantime the bureau can continue its rule by keeping all or part of the bonds in the Treasury.

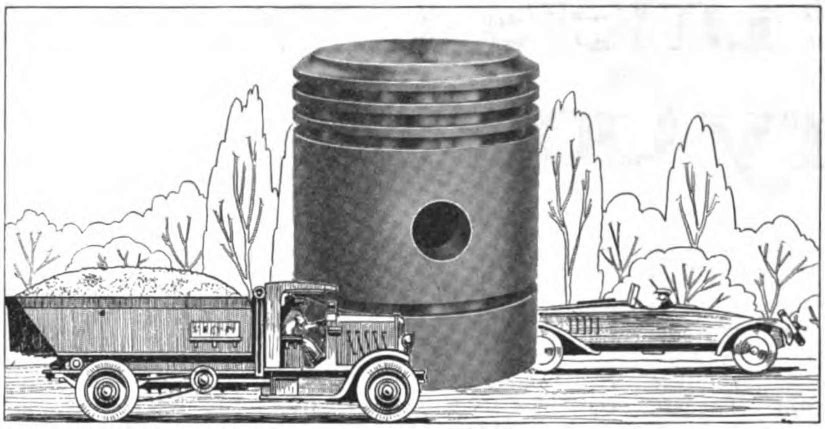
If the bureau's present policy continues, repayment of the $8,892,130 Congress put into the banks as a starter will not be delayed; it will be repaid in the near future; but loans to farmers will continue to be restricted—scandalously, judging by comparison of past applications and loans—thus hindering development of agriculture and fattening loan sharks; and instead of widespread, co-operative agricultural control of the banks there will be, more and more as time passes, bureaucratic control which now is highly centralized—an absolute perversion of the intent of the law. It will be possible for four men—five, including the Secretary of the Treasury as ex-officio member of the bureau—"sitting in Washington, remote from farms and farmers, entirely in sympathy with high finance and the party in power," to dictate the loan and all other policies of the so-called farmers' banks.

By the law, when any one of the banks accumulated $50,000 of mortgages it should issue bonds against them; but the bureau waits until, in all the banks, a large number of mortgages have accumulated, and then puts out a bond issue through a syndicate in financial centers, yielding a few persons large sums for handling the issues and giving individual banks, hence farmers, little chance to invest in the bonds. This means that money deposited in the usual way in banks everywhere seeps toward the chief money-manipulating center, New York, where its investment is not as likely to benefit the regions in which it originates, as if it were available for investment in those regions, agriculturally or otherwise.

There is a provision in the law, by which farmers would



CLETRAC TRACTOR HAULING SLED USED FOR CARRYING SUPPLIES FROM THE HETCH HETCHY RAILWAY TO THE TUNNEL PORTAL ON THE GREAT POWER AND WATER PROJECT WHICH MEANS SO MUCH TO THE SAN FRANCISCO BAY DISTRICT.



JAHNS Quality Pistons

For the motorist who buys them—or the mechanic who recommends and installs them—there is the greatest satisfaction in Jahns Quality Semi-Finished Grey Iron Replacement pistons. They are built honestly and accurately upon principles proved and accepted by the world's greatest automotive engineers.

Every Jahns piston combines the elements of strength and light weight in exactly the right proportion. There are no freak designs or mechanical frills.

Made and carried in stock for every size and kind of motor. They are semi-finished and require only slight adjustment on the part of mechanics.

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buy stock in local National Farm Loan Associations, which in turn would buy stock on the regional land bank, thus gradually giving the farmers' associations control of the banks. The temporary (!) bureau wants this provision killed!

And so on. Why? Echo answers, Why? The bureau's chairman has been a lawyer, county judge and country banker. The others are an ex-Congressman who has studied law; a sea captain who also was a clerk in the Department of Agriculture; a department store man who had a short banking experience on the Pacific Coast; and the Secretary of the Treasury, ex-officio.

Soule is Cletrac Foreign Sales Manager

Cleveland Tractor Co., Cleveland, announces appointment of Edward Soule as foreign sales manager. Mr. Soule's early career as an attorney helped him in business and brought him, after a term of years with Studebaker Corporation's foreign department, into the position of assistant foreign sales manager of Cleveland Tractor Co. He held this position from the beginning of 1917 until his recent promotion. Mr. Soule reports a very decided improvement in foreign tractor business during the last 60 days.

To Make Tractor in Portland

Formation of a tractor company to manufacture a farm tractor in Portland, after designs recently worked out and patented by a Portland man, has been completed there. It is Bristow Cultivator Tractor Co., composed of Claud S. Bristow, Floyd A. Mitchell and John Brulatour, all Portland automobile or tractor men. Production will start at once, it is stated. The tractor is the invention of Mr. Bristow and is said to have exclusive features for negotiating square corners and working either way on side hills.

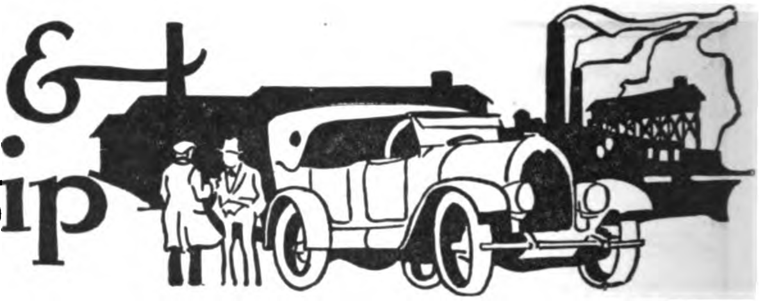
Three New GMC Truck Tractors

Three new models of truck tractors, designed to greatly reduce hauling costs, have been placed on the market by General Motors Truck Co., Pontiac, Mich. The tractors are to meet a growing need for an adequate power plant to haul "semi" and full trailers, carrying a load as high as 15 tons.

The new tractor-trailer combination, it is stated, will reduce transportation costs in some instances as much as 50 per cent and will enable a concern to transport goods over any state highway under a load as heavy as 15 tons, without violating any state laws governing truck loads. This is accomplished by the GMC factory so designing the tractor that the huge load is distributed evenly over from 6 to 8 wheels, which, it is said, will comply with all state laws governing pounds per wheel in truck loading.

Lem Loosehead says: More sport in seein' how fer ye kin throw a handful o' silver dollars, th'n throwin' away tires which oughta be repaired.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

This business of today is credited largely to replacements. Cars have been replaced by thousands. The old ones have been driven one or two years beyond the stage where they ordinarily would have been given up for new cars. Return of other business to somewhere near normal status has provided a market for used cars, and there is not so much talk of the glut in that market now.

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A record breaking year in automobile production seems almost certain. The manufacturers, in case after case, report a production for the first 5 months of the year in excess of the entire 1921 output. July and August may show a dropping off, but that will not be for lack of prospective market, but because makers are playing safe.

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Recent production figures might have been larger had not material become scarce. There are so many parts to an automobile that shortage of only one will hold up factory production seriously. There also was a serious shortage of skilled labor. Sounds funny, does it not, to talk of shortage of labor after so many months of surplus of it!

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One encouraging feature of all reports is the gain in motor truck manufacture. The makers in the commercial car field are having a look-in for business for the first time in two years.

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Truck production is smaller than it might have been had it not been for the Slough Trading Co., which imported trucks we sold to France for a song and which, after the war, France sold to Slough. Many of these trucks are stored under the 59th St. bridge in Long Island City and are reported not to be selling, in spite of low prices, but the influence is felt in held-back sales. However, truck production increases from month to month and the truck makers are very well satisfied.

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Representatives of tire makers state the big tire companies are losing money today on tires sold to car manufacturers, and that they hardly are making up this loss through the trade outside of the manufacturing district, as there are so many smaller companies providing tires for replacement business. It is said the Big Four among the tire makers do 85 per cent of the business with the manufacturers, but only have 15 per cent of the replacement business, the other 85 per cent of that going to the hundred or more smaller tire makers.

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For the first time in two years freight transportation is troubling the makers, and driveaways are beginning again, in numbers large enough to create attention. This condition, with the reports of unfilled orders, and of record breaking production figures, all tend to create the worldwide interest being taken nowadays in the automotive business.

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New makers are profiting by the situation and those who got under way last year, in the face of conditions, are getting into the class of big producers. Some of the older makers are said to be complaining of lack of business, but these are the sort who fail to advertise when business is good, on the plea that they are able to sell everything they make, and then will not advertise during such times as have been experienced in the last two years, on the theory that advertising would not sell cars anyway. Several makers of that class are not very busy, and it is said several are on the verge of bankruptcy—and rightfully so. It is to be noticed that makers who advertised regularly, right through the depression, not only did business then, but entered the present stage of the industry with a headway which rapidly placed them in enviable position. Today they are either leaders or very close to leaders in their class.

—

Production costs are tending upwards. There has been increase in commodity prices. While one maker lowered prices, recently, his reductions caused not a flurry, as far as may be determined. An increase in prices is said to be certain all along the line, and that very shortly. There is a tendency to increase wages to get workmen, for workmen are scarce; and this increase must be taken up.

Parts and accessory and tire makers are said to be supplying the makers at cost and even below cost today, due to keen competition, and anxiety to get the business well established again. These makers cannot go on, and must change. Their actions are being watched. It is said that several of them are on the verge of failure because their prices are below cost.

Thus far, automotive manufacturers have suffered from the coal strike only indirectly. aPrts and accessory makers and the steel makers in particular have been forced in some instances to reduce production. This, of course, hits the business.

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Recently a case came to light which ranks with good old times. A motor car manufacturer said that he was being pressed by dealers and distributors to find them cars. That sounds good. A well known traveler came to Detroit seeking some maker who had cars to sell, as he said he had customers but was unable to fill orders with the car he had represented, and could swing the business could he but find a good car in the same class, the maker of which was seeking business. That also sounds like good old times. Ain't it so?

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If continued, production this year will total 2,500,000 vehicles, of which about 300,000 will be for commercial purposes, that is commercial cars. It has been shown that 90 per cent of passenger cars are used for business more or less.

Such production, in view of authorities, is not possible, so everyone figures that a seasonal slump must come, and is prepared for it. Summer always has brought one, so we simply gotta have it.

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Conditions this year are such that this business may prove to be an all-year-round business. Circumstances change daily, almost.

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The makers are guessing—as a rule, as to the possible market among the farmers; because, if the business is to go on and on, to a record breaking year, then the farmer must enter into the calculations. The present business, through breaking record, has been in the cities. As normally farmers buy more than 50 per cent of the motor vehicles, the speculation among makers now is about the farmer.

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While there has been no let-up in demand, and while makers are still behind in orders, advice is being given to proceed cautiously for the next three months.

Chapman Heads Dorris Sales.

W. A. Chapman has been appointed as director of sales of Dorris Motor Car Co., St. Louis. Mr. Chapman for the past year has been in complete charge of sales in the automobile department of the St. Louis Car Co., manufacturer of the Skelton car. Like a number of other men in the automotive industry, he originally was in the farm implement business. He managed a branch of Rock Island Plow Co. at Oklahoma City. Later he went to Dort Motor Car Co. of Detroit, as field supervisor, assisting the general sales manager. Following this, for a short time he was in charge of the Canadian plant of Gray Dort Motor Co., Ltd. In this capacity he put over a winning proposition.

Mr. Chapman first became connected with Dr. L. S. Skelton when he went with Dr. Skelton's distributing houses as general manager. This company at that time was a clearinghouse for the Dort, Velie, Mitchell and Premier. Later, when Dr. Skelton organized a company in St. Louis to manufacture automobiles, Mr. Chapman was elected vice president and general manager of the new company.

Mr. Chapman is recognized as one of the best sales executives in the industry. He knows the automobile business thoroughly, and as a worker and pusher is said to be in a class by himself.

* * *

Meeting at Oakland Factory.

The annual sales meeting of branch managers and distributors of Oakland Motor Car Co., was held at the factory in Pontiac, July 13-14. There was a banquet at the Bloomfield Hills Country Club. C. J. Nephler, general sales manager, presided there and at some of the business sessions, and W. R. Tracy, assistant sales manager, presided at other of the sales sessions.

Tribute was paid by all the speakers at the banquet to George H. Hannum, president of the company, who is responsible for the Oakland 6-44 model. F. D. Van Amburgh, noted author, was the principal speaker.

Among the branch managers were L. S. Shoup, San Francisco; L. G. Bellinger, Spokane. Among the distributors, M. L. Smith, Denver; Reeve Gartzmann, Los Angeles; R. K. Roberts, Seattle.

* * *

He Began on the Coast.

C. B. Voorhis, vice president and director of sales of Nash Motors, Inc., Kenosha., Wis., announces that increasing business has necissitated appointing another assistant sales manager. C. H. Bliss was advanced to that position several weeks ago, he having been with the organization since it began. The second one is E. L. Smith, who is regarded as a valuable acquisition. He began his business career in California, where for a number of years he was a manufacturer. Selling his business, he joined the National Cash Register Co. sales staff, traveling out of Portland. In 1919 he did wholesale sales work in the Portland field for one of the large automobile companies, for which, in September, 1921, he became district manager in St. Louis. He left that position to go to Nash.

* * *

Moon Motor Car Co. Election.

At the annual meeting of stockholders of Moon Motor Car Co., St. Louis, July, 5, the following officers were elected: Stewart McDonald, president; W. D. Hemenway, vice president; A. F. Moberly, vice president; Stanley Moon, secretary; H. W. Klemme, treasurer; Earl F. Nelson, assistant treasurer; J. S. McIntyre, assistant treasurer.

The following were elected directors: Stewart McDonald, W. D. Hemenway, Stanley Moon, C. W. Burst, F. H. Rengers, G. H. Schelp, A. F. Moberly.

Mr. McDonald reported that the company is enjoying the greatest volume of business in its history. May showed an increase of 126 per cent over May of 1921 and June an increase of 194 per cent over June of 1921.

Production is between 40 and 50 cars per day, largest in the company's history, and July was expected to exceed any previous month's business by 50 per cent. Unfilled orders on July 1 were approximately 15 per cent more than on June 1.

* * *

Howe Starts Ad Department.

Howe Rubber Corp., New Brunswick, N. J., through Otis R. Cook, vice president and general director of sales, announces the establishment of a complete advertising department, at the general sales office in Cleveland, in charge of Harry Hayden.

Howe sales since the first of the year, are reported as growing steadily, and it is stated that the company has not only earned sufficient to meet all operating expenses, but in addition,, has shown substantial monthly profits.

* * *

To Reorganize Premier.

Premier Motor Corp., Indianapolis, will be reorganized. Fletcher Savings and Trust Co. was appointed receiver recently.

Ye Olde Timers

Officers of the Old Timers' Club: President, William L. Hughson, San Francisco; secretary, F. Ed. Spooner, 420 Book Building, Detroit; treasurer, J. Ed. Schipper, Detroit. There are 11 vice presidents, who also are directors. In all there are 19 directors. The personnel makes the organization truly national in character.

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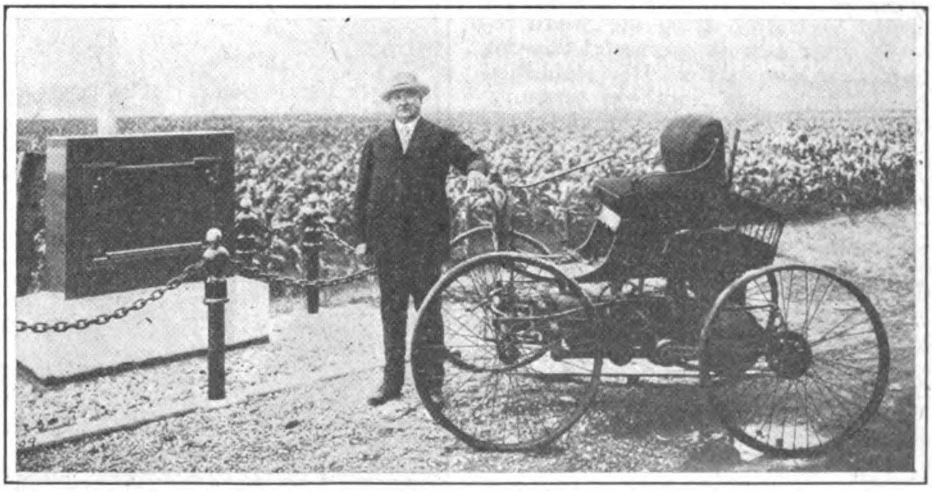
Men long employed in the automotive field but out of positions during the slump of the last two years have formed connections. The office of the Old Timers' Club, through which many were able to do this, now has requests from manufacturers that cannot be filled.

Many who filed their names at the Old Timers' Club office and left their records have taken positions and have not notified the office, causing some confusion. Accordingly a new list has been started.

Hundreds of good men, veterans of the industry, worked out into other fields during the depression and will not return. Youngsters, comparatively inexperienced in the automotive field, are finding this an exceptional period to make good. The makers have sent into the field men anxious to do that. They are covering the smaller cities, with good results.



ELWOOD HAYNES, HIS PIONEER CAR AND THE TRIBUTE TO HIS ACHIEVEMENT.

This picture of Elwood Haynes, president of the Haynes Automobile Co., Kokomo, Ind., and of his pioneer automobile, was taken recently in front of the marker erected July 4, on the Pumkinville Pike, near Kokomo, as a tribute to Mr. Haynes' achievement. On the tablet, made of stellite metal compound invented by Mr. Haynes, is a representation of the pioneer car in bas relief. Beneath that are the words: "In commemoration of Elwood Haynes of Kokomo, Indiana, the inventor, designer and builder of America's first mechanically successful automobile, in the year 1893. This tablet marks the road and starting place where Elwood Haynes, on July 4, 1894, seated in America's first car, made the initial run. Here, too, was the birthplace of a new era of transportation; the nucleus and beginning of the now gigantic automobile industry. 1893-4. Dedicated by Indiana Historical Commission and Hoosier State Automobile Association."

Allen A. Ryan Is Bankrupt.

"He got fresh and the powers nailed him," is the Wall Street version of the fact that on July 21 Allen A. Ryan went into voluntary bankruptcy in New York. He listed his liabilities at $32,435,477, of which $27,806,984 are secured claims, and his assets at $643,533. The assets list included such details as theater tickets, and $16 in cash.

Mr. Ryan, son of Fortune A. Ryan, famous financier, is said to have been worth as much as $30,000,000. Early in 1920 he was president of the Stutz Co. Perplexing fluctuations in Stutz stock occurred. It turned out that Mr. Ryan had cornered the stock, and that he had thus turned the tables on Wall Street men who for some reason sought to wreck him. June 23, 1920, he was expelled from the Stock Exchange. He sued the president of the exchange for $1,000,000. The suit pends, no date having been set.

Four months after his expulsion he put his affairs in the hands of trustees. His liabilities then were estimated at $16,000,000.

His largest debt is to Guaranty Trust Co. of New York, $8,822,555 as an individual, and $13,543,608, representing securities owned by him, pledged by him to Allan A. Ryan & Co. and by it repledged to the trust company. That company's claims and some others are secured. A chief unsecured creditor is Charles M. Schwab—$309,555. Samuel Untermyer, attorney, claims $45,000 for services; and so on.

Mr. Ryan was born in New York, May 5, 1879, was educated partly in England and graduated from Georgetown University, at Washington, D. C.

* * *

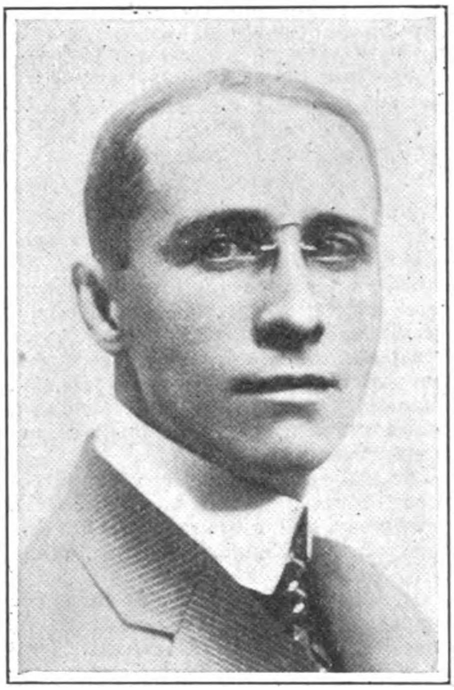
What a Columbia Salesman Did.

Nelson Gotchell, the veteran, returned to Detroit from the South recently after a most successful trip for Columbia Motors Co. He established 14 distributors in Southern territory, sent in $17,000 in deposits and took orders for more than 1400 Columbia sixes. He found dealers and distributors in bad financial shape, due to the serious depression of two years, and was compelled in many instances to obtain backing for new entrants into the field and in doing so raised capital of over $250,000. Mr. Gotchell says real salesmanship in the South right now will "bring home the bacon;" and that remark applies to any territory. Hence the careful investigation by all makers of the salesmanship qualities of applicants.

* * *

Sees Southern Business Ahead.

J. J. Plath, director of sales for the Maxwell Motor Corp., who returned recently from a trip through the South, sees possibilities of increased business throughout the Southern states. He says steel mills in the Birmingham district are flooded with business, working night and day, and that the same conditions exist in the coal mines of that region, not affected by the strike. Diversified agriculture is assuring more profitable angles since the Southern farmers have ceased to rely solely upon cotton to carry them through.



A. P. KEMP.
At the recent election held by Auburn Automobile Co., Auburn, Ind., Mr. Kemp was elected president and treasurer. He also will continue as general manager, a position he has held several years. The company is in excellent condition, with no debts and a large surplus for expansion and development.

J. I. FARLEY.
Mr. Farley has been elected first vice president of Auburn Automobile Co., Auburn, Ind., succeeding Morris Eckhart. He will continue as director of sales. His promotion, like that of A. P. Kemp to the presidency, came as a reward for unusually good service.

Racine Tire & Rubber Co. Changes.

It is a not infrequent occurrence with manufacturing organizations that the successful sales manager decides it would be more profitable to sell the company's product for his own account. Such a situation has caused the resignation of Russell Y. Cooke as sales manager of Racine Rubber Co., to accept the presidency of the Racine Tire & Rubber Co., of Chicago, Racine tire distributor for a generous slice of territory naturally served from Chicago, in which he has acquired a substantial interest.

Mr. Cooke was succeeded on July 1, by L. M. Van Riper, who takes the title of general sales manager, assuming full charge of Racine distribution throughout the country. For the past two years Van Riper has filled the important position of Western sales manager of Ajax Rubber Co., with headquarters at Chicago. He won his way to that post from the Detroit district. For some years previous to going to Ajax, he was with United States Tire Co., managing the Chicago branch for a considerable proportion of the time.

* * *

Moving Standard Offices.

Standard Motor Car Co. is moving its general offices from the engine manufacturing plant at Pittsburgh to its main plant at Butler, Pa., which is connected to Pittsburgh by rail and several main highways. The change is to better dispatch the company's general business and economies. The big manufactory of the Standard Steel Car Co. also is at Butler, adjacent to the Standard Motor Car Co. plants.

Motor car operations in Butler include rolling mills, foundry, spring manufacture, sheet metal departments, frame manufactory, paint and upholstery departments, top and wind shield manufactory and general assembly.

The Standard's big body, axle and steering gear plant at Worcester, Mass., is situated ideally to control a specialized character of labor for the work in hand, as are the Ellwood City, Pa., Hammond, Ind., and other plants which supply forgings and other materials for the manufacture of Standard Eights.

* * *

Drumpelmann on the Outlook.

W. J. Drumpelmann, sales manager of Rickenbacker Motor Car Co., after returning from a recent trip to 19 of the larger Eastern cities, said that buying for the remainder of the year would be steady, not feverish; that July production would be absorbed by unfilled June orders and that probably the farmer buying will take care of production for the fall and perhaps keep the factories up to the average production of today. Closed cars will be more and more in demand and the fall trade for closed cars will be heavy.

Only 1 or 2 per cent of things patented are commercialized afterward.

You'll Feel at Home at the Botsford

When Motor West selected this comfortable, home like, and fire-proof hotel as San Diego headquarters for all who read and travel, the three chief demands of the well-read traveler were considered.

LOCATION - SERVICE ATMOSPHERE

Manager Floyd B. Kirk takes especial pride in the central location of his house—just north of Broadway on 6th street—the courtesy extended to guests by all employes, the up-to-the-minute accommodations he has to offer, and the cozy lure of hominess that pervades his entire establishment.

Before you start, be sure of Special Rates and Reservations by wiring—

HOTEL BOTSFORD
SAN DIEGO, CAL.

Ricker, Duesenberg Plant Head.

Chester S. Ricker, who for ten years has co-operated with engineers of the best known cars built in Indianapolis, and who for several months has been consulting engineer of Duesenberg Automobile & Motors Co., Inc., Indianapolis, now is general manager of plant operation. This permits L. M. Rankin, vice-president, to give all his energy to distribution, financing and executive affairs.

Mr. Ricker assisted in developing, refining and producing the Duesenberg. Back in 1916, under his direction, the 16 valve Stutz motor was designed and produced, and last year he re-designed the original Stutz motor, bringing out the new DH type, which has had great success. He also has served the Lexington, Ansted, Midwest Engine and Nordyke & Marmon companies.

In the Duesenberg Co. Mr. Ricker associates himself with President Worthington; Mr. Rankin, vice president and general manager; Mr. Reilly, secretary-treasurer; and Fred and August Duesenberg, chief and assistant engineers.

* * *

Seeking Zeder Car Agency.

Dealers from all over America are seeking the agency for the Zeder car, to be manufactured by Allyne-Zeder Motors Co., Cleveland. Charlie Zeder is the man who designed the present sensational Studebaker model, and he designed the Chrysler Six, which was not manufactured but which made a sensation among members of the trade. It is believed his present car will prove quite as sensational as his models of the past. R. T. Hodgkins is vice president and general sales manager for the new company. He formerly was in like position with Studebaker Corp.

AC

The Standard Spark Plug of the World

Every motorist is a prospect for the sale of AC Spark Plugs because most cars are factory-equipped with AC's and there are specially designed AC's for all other engines, too.

A C Spark Plug Company
FLINT, *Michigan*

Durant Is Locomobile President.

New York news, July 22, was that W. C. Durant had become president of the Locomobile Co. There followed official announcement by W. C. Durant, saying the Locomobile will continue to be manufactured at Bridgeport. With the financial strength and advice of his great organization behind it, he declares Locomobile prospects never were brighter than now.

Durant is said to have paid $2,000,000 for the Locomobile Co.

* * *

Packard Business Survey Optimistic.

Packard Motor Car Co. has completed a business survey of the entire nation. The services of 500 persons were used to obtain reports. Bankers and leaders of all manner of industries in all parts of the United States were interviewed, as well as stock and grain men of the Middle West. All reports are optimistic, in every line of endeavor, according to the flood of telegrams received at the Packard office in Detroit.

* * *

50,000 Body Order from Durant.

American Motor Body Co., Philadelphia, is using 1200 men on several large orders from automobile and railway companies. One is said to be from Durant Motors, Inc., for 50,000 bodies.

* * *

If this things keeps up, motorists will be saying to each other: "Well, so long—see you in jail."

LOS ANGELES WAREHOUSE COMPANY

MAKES A SPECIALTY OF AUTOMOBILE STORAGE

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
14727, Main 4787

Nash Earnings Large.

Nash earnings, the first 5 months of its fiscal year to April 30, were $2,173,000—within 2½ per cent of the entire previous year's total. Steady production and steady prices are given credit. Nash shares are fairly fat with accrued value. The surplus as of April 30, $14,905,000, equaled $273 a share of common. Issuing four new shares for every one of the shares outstanding would still leave surplus at $67 a share. The preferred stock is at a premium. Junior shares showed a balance on April 30, after preferred dividends, exceeding $37 a share or at $90 per share for the full year. Last year the balance was $35 and the previous year, the best, more than $122. The bonus common, available in ratio of one for every four preferred, has paid a total of $79 a share to date. A block of four shares of preferred and one of common, bought for $400, could be liquidated today for $810.

* * *

Mrs. Dodge Auctions Cigars.

Recently Mrs. Horace Dodge left Detroit with a party on her yacht, the Delphine. It was found the humidor contained only three cigars—two 15 centers, one 20 center—not enough to go around; so Mrs. Dodge auctioned them for $5000, which was given to the fund for the American Committee for Devastated France, headed by Mrs. Dodge. One cigar went to A. T. Waterfall, vice president of Dodge Brothers, for $400. Albert A. Andrich, production manager, paid $500 for one. Who paid $4100 for the third one was not made public, but Thomas F. Cashin, office superintendent of Dodge Brothers, smoked it.

* * *

Nobody Wants Olympian Plant.

When the former Olympian Motor Co. plant at Pontiac, Mich., was offered for sale, with its many buildings and 17 acres of land, recently, there were no bidders. Friend Motor Car Co. was the most recent owner, Otis Friend, former vice president of General Motors, having taken over the Olympian, of which he failed to make a go for some reason. Mr. Friend brought out a new model, the Friend, and exhibited at the national shows in 1921 and booked quite a number of orders.

* * *

Firestone's Canada Plant.

The Firestone plant in Hamilton, nt., is to open September 15. The site, 60 acres, is on Hamilton Bay. The main, 5 story building is finished and machinery is going in. Tires and tubes will be made at first, then also belting, hose, possibly boots and shoes.

* * *

More Lincoln Decimation

The recent removal of Ford sales, advertising and service departments from the Highland Park plant in Detroit to the Lincoln plant seems to have been a peculiarly Fordian way of absorbing similar Lincoln departments—the departments have been moved back to Highland Park, with "several" employes of the Lincoln staff included. The move is declared to have been for "beneficial psychological effect."

* * *

Olds Endows Turkish School.

R. E. Olds, veteran motor car maker and philanthropist, dodged automobiles in Constantinople, returned to Paris early in July, had similar experience there, and remarked that if he lived there he would start a school for chauffeurs; and for Constantinople he and Miss Clara E. Mills did that very thing. The Turkish school, first of its kind, is in charge of the Near East Relief officials and has seven pupils.

* * *

Wonderful Set of Gauges.

Cadillac Motor Car Co. possesses the first set of Johansson blocks, invented by C. E. Johansson, Scandinavian scientist, imported into this country. Cadillac bought them two years ago. The set is used as a check on jigs and fixtures. Deviations from absolute dimension are controlled within 1-100,000th inch.

* * *

First Instruction Book in Arabic.

What is said to be the first automobile instruction book to be printed in Arabic has been received by Willys-Overland, Inc., from its dealer in Cairo, Egypt. It is illustrated with views of the motor and chassis, and charts of the various mechanical operations that go to make up an automobile; also an illustration of the car.

* * *

On Rolls-Royce Western Sales.

Ralph B. Jackson has been appointed western sales manager for Rolls-Royce, succeeding J. E. Roberts, who resigned recently. Mr. Jackson previously was with Pierce-Arrow as district sales representative. He will make his headquarters in Chicago.

* * *

Goodyear Building Dirigibles.

The Navy's recent order for three dirigibles brings Goodyear aircraft production to capacity. The Navy airships, to be built for helium gas inflation, will be begun when three being built for the Army are completed.

* * *

Hackethal with Fox.

P. F. Hackethal, connected several years with the Mercer and Templar companies, has been appointed consulting and research engineer for Fox Motor Car Co., Philadelphia.

* * *

Maxwell Motor Corp. reports orders are coming in at the rate of 400 a day, 10,000 a month. Production is between 6500 and 7000 cars a month.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

Edward V. Hartford Dies.

Edward Vassalo Hartford, head of E. V. Hartford, Inc., New York, manufacturer of Hartford shock absorbers, of which, as of several other automotive appliances, he was inventor, died recently in New York at the age of 52 years.

Mr. Hartford was active many years in a large chain of tea stores, as vice president. His automotive connections began in 1897, when he went to France and returned with the agency of the De Dion tricycle. In 1904 he brought over the Truffault-Hartford shock absorber, but passed through several years of litigation before finally establishing his claims. In addition, he was a pioneer in the invention and manufacture of electric starter mechanisms.

* * *

Evolution Eliminates Apex.

Apex Motors Corp., Ypsilanti, Mich., manufacturing the Ace car, is being wound up and Saxon Motor Car Corp., which has been occupying the new plant of the former for some time, will take over the old plant also.

Harry Hanover, president and general manager of Apex, is general manager of the National Transportation Mfg. Co., which will manufacture Diamond taxicabs and which has taken the former Flanders Mfg. Co. plant at Chelsea, Mich. The taxicab company is an outgrowth of Apex, which had started in the manufacture of taxis prior to determination to stop manufacture of the Ace passenger car. Originally the Ace was made exclusively for Seattle distributors, and attempts to place it upon the national market came when the slump began. It is stated by the creditors' committee that the company will pay all debts fully. Mr. Hanover was a most successful manager, taking hold when the company was in great difficulties, and his fame has gone forth in the trade accordingly.

* * *

Haynes to Visit Others' Shrines.

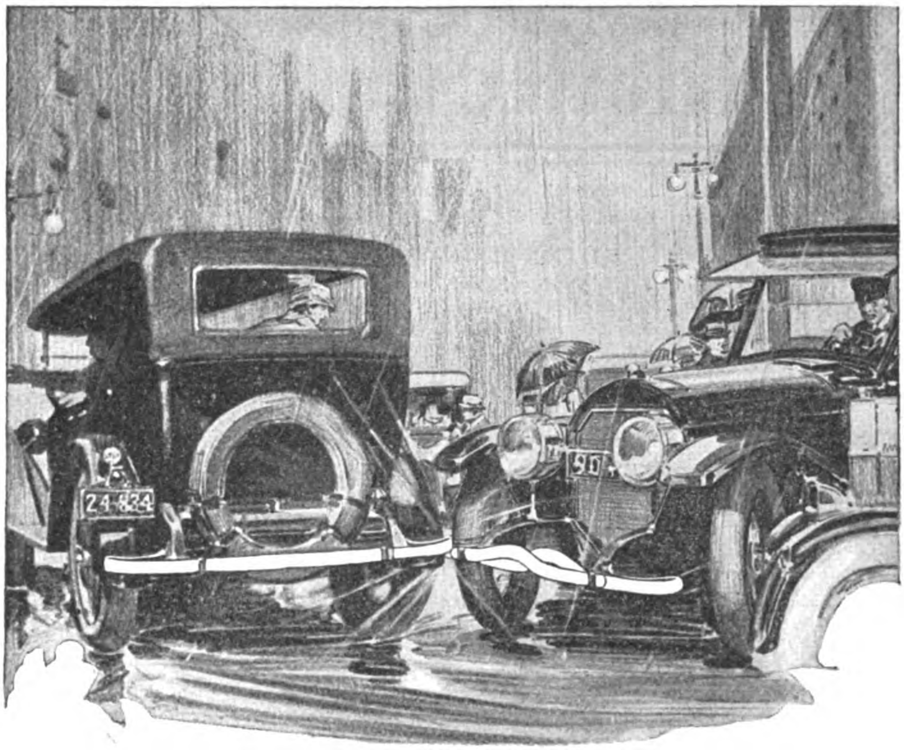
On July 4 a shrine honoring Elwood Haynes, president of the Haynes Automobile Co., was unveiled on Pumpkinville Pike, near Kokomo. On August 1 Mr. Haynes, accompanied by Mrs. Haynes, sailed to see other shrines, specific and regional; especially the region in England where the "lake poets," Coleridge, Taylor, Wordsworth and Southey, lived and wrote. Later France, Italy, Spain, Belgium and Germany will be visited.

* * *

Cycle Car Maker Buys Parenti.

The factory of Parenti Motors Corp. at Buffalo has been sold to Hanover Motor Car Co. of Hanover, Pa. The purchasing company is the manufacturer of a cycle car with a 2 cylinder air cooled engine, to sell at about $250. Much material was purchased with the plant.

(More factory items on page 63)



A sharp turn--CRASH!!!

LEADING car swerves to right. Driver in rear doesn't see signal —CRASH! A brief stop and both cars go on their way, *undamaged*. Each had Lyon Spring Bumper protection, front and rear.

Powerful spring steel construction with the Lyon-patented two-piece overlapping front bar and the open "looped-ends" make Lyon Spring Bumpers so resilient. No matter where they are struck, or from what angle, they always yield to the impact and absorb it.

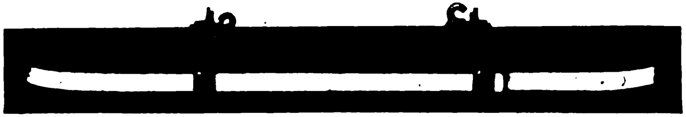
Insurance companies grant reduced rates on Lyon-protected cars. These reductions more than pay for the bumpers. Then, too, Lyon Spring Bumpers are guaranteed to take the full force of any blow at the rate of 15 miles an hour without injury to the car or its occupants.

Lyon Spring Bumpers not only protect your car, but also enhance its beauty. They are artistically shaped, unusually strong and perfectly balanced. A special Lyon-patented hook-bolt attaches them securely without drilling or altering the frame.

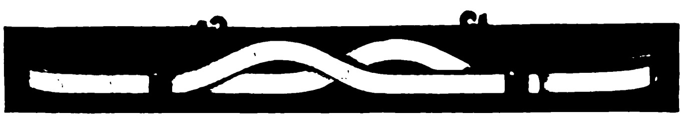
Over a million in use. $10 to $23.

The Lyon trade-mark is on every genuine Lyon Spring Bumper. Accept no substitute.

METAL STAMPING COMPANY, Long Island City, New York
Canadian Licensee, B. J. Coghlin Co., Ltd., Montreal, Canada

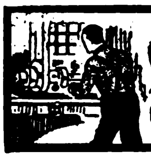


Lyon Straight Bar Bumper



Lyon Convex Bumper

LYON RESILIENT BUMPERS



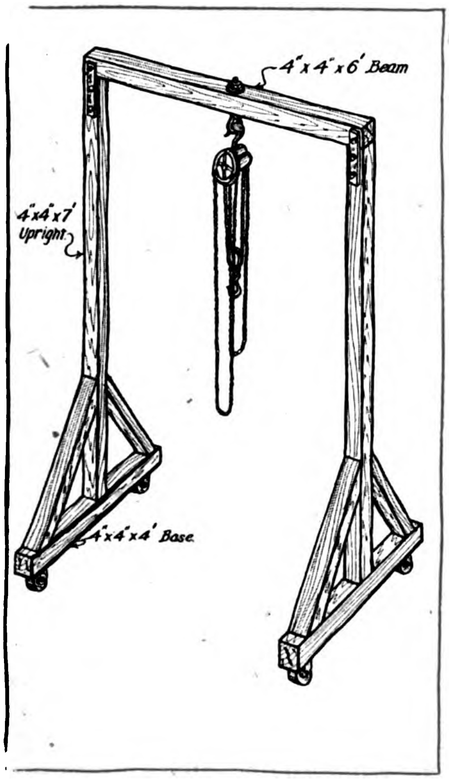
Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

HOIST TO LIFT MOTORS.

A very handy and convenient hoist, such as is illustrated on this page, can be built cheaply. It should be made of good lumber so as to be of sufficient strength to lift the heaviest motors or even the front or rear of a car.

The beam at the top is a 4x4 inch, 6 feet long. The two uprights also are 4x4 inch, 7 feet long. The beam at the top may be fastened to the uprights by a heavy piece of iron on each side, held by bolts. The base also is made of 4x4's, one on the lower end of each upright. These pieces should be 4 feet in length, or long enough so that the hoist will not tend to tip over when under load. A brace made of 2x4 is placed on each side of the upright. The complete hoist is mounted on four heavy swinging castors, so as to be moved easily. If hoist is used to lift one end of complete car it can be moved easily from one part of the shop to the other if necessary. An eye bolt is placed in the exact center of the beam, or better still, place a heavy iron strap around the center of the beam to hold this eye, as drilling a hole in the beam of course weakens it. A chain block is then mounted on this eye, to be used for lifting. You also can increase the strength of the hoist by placing a 2x4, about 2 feet long, from the beam to the upright on each side. This hoist will be of sufficient strength to lift any motor from the frame or to lift either end of any automobile. It should be a great help in any shop.



HOIST TO LIFT MOTORS, EVEN CARS.

THE HANDY CORK.

One of the most vexatious greasing problems is to insert grease through a plug-hole larger than the nozzle of the gun. To keep the grease from going everywhere but into the hole, obtain a cork about the size of the largest grease plug on your car. Bore a hole in this cork so that it will slide over the stem of the grease gun, and when you are filling a large hole simply push the cork down to fill the oversize opening. Chemist's rubber corks are ideal for this purpose. A rag or some string packing can be used in emergencies if a cork is not handy.

PACKING WATER PUMP.

When packing a water pump on an engine, take care that pump shaft is not rough, as the shaft will rust and pit, and if new packing is put in on a rough shaft it will cut right out. If pump shaft is rough, with a piece of sand paper or emery cloth go over the shaft until it is smooth and bright, then pack with new packing and it will wear indefinitely. Graphited packing is best.

CARBON BURNING RISKY.

When burning carbon with oxygen, be very careful of fire. Always keep a fire extinguisher at hand. Shut off gas line and start engine and let it run until it dies, to remove all gasoline from carburetor, then cover all oily parts of engine with asbestos before starting the job.

FILE PINNING.

In filing steel or wrought iron, the file is liable to "pin," that is the filings become wedged between the teeth. This may be prevented somewhat by filling the spaces with chalk or oil, or both. If a file card fails to remove filings, use a thin piece of soft iron, not hard steel.

HAVE IT WARM.

Adjustments made on the engine while it is cold seldom are satisfactory in actual operation. The engine heats up when running and the metal expands with the warmth, thus nullifying adjustments made when the engine is cold.

A LEATHER TIP.

A leather washer placed underneath a metal washer not only helps to eliminate unnecessary noise but gives a sort of elastic compression that prevents stripped threads when the bolt is a little small for its job.

SAFETY FIRST

Keep all such parts as emery wheels and grinders and gears in your shop under a guard of some kind, to prevent danger of any one falling into a gear or emery wheel, as this might prove very serious.

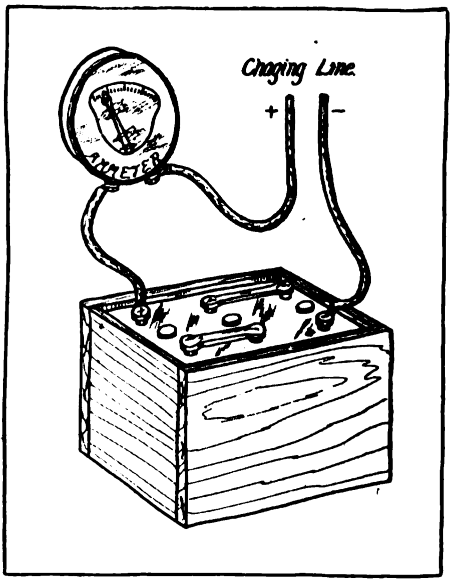
WHERE SQUEAKS MAY BE.

Squeaks in the body of a car may be in the floor boards, which may be loose and rubbing together; in loose doors, windshield or brackets; in the dash, particularly where it is secured to the body, where the body rests on the car frame; or in the top bows and braces.

RECHARGING A BATTERY.

A storage cell is a secondary cell and therefore can be charged when it becomes discharged. There really is no current stored in a storage battery, it merely is a term applied to a battery of this type. When a battery is discharging, the current generated by chemical action flows from the positive pole, marked + in the sketch, to the negative pole marked —, and will continue to flow as long as it has a circuit, until the chemicals have changed to their normal condition. The battery then is discharged.

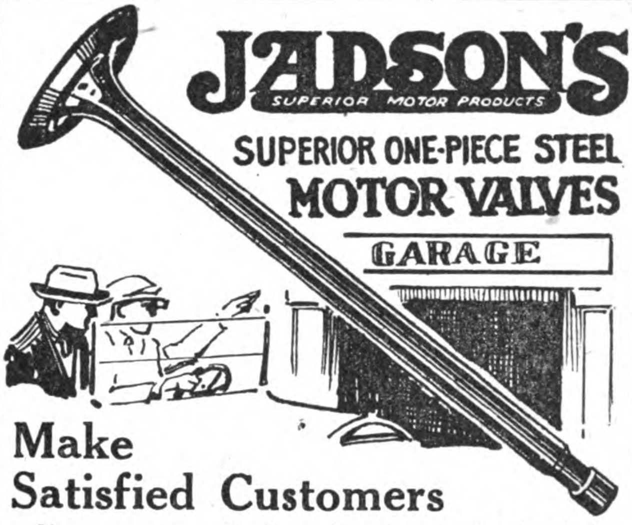
In recharging a storage battery, direct current must be used. If only alternating is available one must use a rectifier or a motor generator, set to change the alternating current to direct before passing it through the battery. Any type of rectifier can be obtained at any supply house. When the battery is connected to the charging line, the positive pole of the battery must be connected to the positive wire of the charging circuit and the negative to the negative, so that the charging current will pass through the battery backward or in the direction opposite to the current when discharging. In doing so this current will reverse the chemicals or change them from their normal condition. When the change in the chemical is complete the battery is full charged. This is determined by taking a hydrometer reading every 2 hours during the latter part of the recharge; when two successive readings are the same the charge is complete. Some kind of resistance must be used in the charging circuit to control the flow of current, such as a rheostat or a lamp bank. The charging rate of a battery is about 1/20 of its ampere capacity.



CONNECTING BATTERY FOR RECHARGE.

RATTLING HOOD.

A hood that rattles from the vibrations of the engine may be silenced by drilling a series of holes in the band of metal on which the hood rests and threading a strip of leather through the holes. In this way the hood rests on leather instead of metal.



JADSON'S

SUPERIOR MOTOR PRODUCTS

SUPERIOR ONE-PIECE STEEL MOTOR VALVES

Make Satisfied Customers

Your customer will always be a booster for the dealer who sold him Jadson's One Piece Steel Motor Valves, the valves that are hand forged from ONE PIECE of tough chrome nickel steel. They won't warp, scale, pit, break or burn out. They give more power and permanent satisfaction. They'll establish you forever in the customer's mind as a dealer in quality goods.

JADSON'S VALVES sell on sight. Profit quickly and permanently by stocking JADSON'S ONE PIECE STEEL MOTOR VALVES.

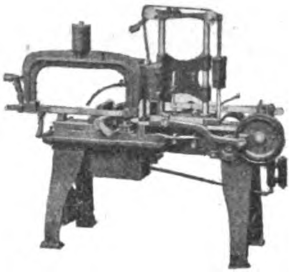
Manufactured by

J. A. DRAKE & SONS, Inc., Reedley, Calif.

Sales Department: Allied Industries, Inc.

San Francisco Seattle Los Angeles

MONEY MAKING MACHINERY



Why cut off bars in the lathe or by a hand hack saw when the

STERLING POWER HACK SAW

will do all this work for you automatically?

Built in four sizes for cutting off cast iron or steel up to 8"x12".

Distributed by

SMITH-BOOTH-USHER CO.

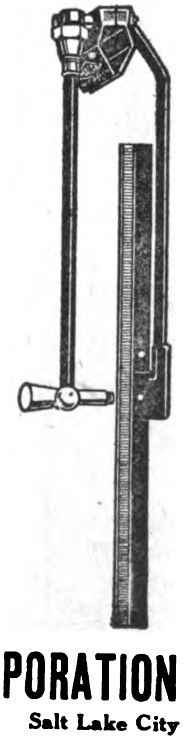
Machinery, Industrial and Construction Equipment Supplies

San Francisco
50-60 Fremont St.

Los Angeles
228 Central Ave.

MALCO 3-in-1 WINDSHIELD CLEANER

A BIG MONEY MAKER



One model fits any car—open or closed.

Can be installed in three different ways—it clamps anywhere on the windshield frame or through a hole in the frame.

JOBBERS AND DEALERS

Write today for price lists, descriptive folders and information about our sales-helps.

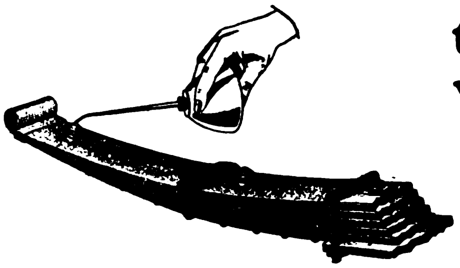
Retail $1.50 U. S. A.

MALCO

MALCO PRODUCTS CORPORATION

220-221-222 West So. Temple St. Salt Lake City

Stop Squeaky Springs this Way



It's surprisingly easy and wonderfully effective. Simply squirt the oil into the self-closing metal caps, and the felt pads inside hold it snugly against the springs, enabling the oil to PENETRATE BETWEEN THE LEAVES where it is needed.

RELIABLE SPRING OILERS
COLUMBUS, OHIO
"Put the Grease Where the Squeak Is"
TRADE MARK REGISTERED

They completely envelop and protect the springs from dirt, dust, water, mud, slush and snow. That means they prevent rust! Also, they stop squeaks by keeping the springs thoroughly lubricated all the time, which means easier riding and better tire mileage.

Every car should be equipped with Reliables. They are made to fit all makes and models. Simply give us name and model of your car and we'll do the rest. Prices range from $4.00 to $15.00 per set. Reliables are guaranteed for three years.

DISTRIBUTORS WANTED: Several exclusive territories still open. Big money possible for right parties financially able to organize territory. Write today for attractive sales proposition. Liberal Discounts to Dealers

THE RELIABLE SPRING OILER COMPANY

208 Reliable Bldg., 30 E. Main St., Columbus, Ohio

New Things in the Accessories Field

REMY LOCK FOR FORDS.

The new Remy transmission lock for Fords, manufactured by Hercules Mfg. Co., Indianapolis, gives Ford owners the same protection against thieves as owners of higher priced automobiles have. It absolutely prevents the engine being turned over by electric starter, by hand or its own power, it is claimed. However, it permits the car to be moved by hand in case of fire or other emergency. It is scientifically designed, and has been given a class A rating by the Underwriters' Laboratories. It fits snugly into top of Ford transmission case by merely screwing it on in the place of the original cover. The lock proper is encased in a hardened steel sleeve, and covered by a dustproof snap lid. The lid comes just above floor board near brake pedal and thus is reached easily from the driver's seat.

The car is locked by a quarter turn of the key. This causes the teeth of a steel forging to project into the flywheel ring gear to completely prevent power plant being turned over. Locking also causes a malleable iron arm to extend under the edges of transmission opening, making it impossible to remove the lock, even with fastening screws taken out. The main locking arm is held securely in the unlocked position and cannot engage the ring gear unless proper key is used. Installed in a few minutes, no special tools required. Price $13.50.

Smiley & Colt, 951 West 16th St., Los Angeles, are the Pacific Coast distributors.

HAYES PATHFINDER.

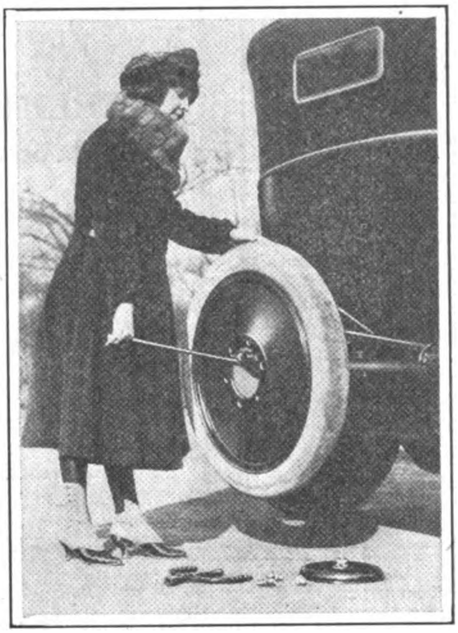
Hayes Motor Truck Wheel Co., Jackson, Mich., began production July 1 of the Hayes Pathfinder, a spotlight for open and closed cars. It has an improved inside control, and can be adjusted to serve also as a trouble light for tire changes or other emergency work around the car.

The reflector is silver-coated to throw a concentrated white beam of light. All parts are full nickel on brass to prevent rust, and the shell is a rich dull black enamel. Any adjustment of the light, in the closed car, can be made from the driver's seat without lowering the windows. It is installed quickly on open or closed cars as a compact, neat, convenient safety light. It sells at $8.50.

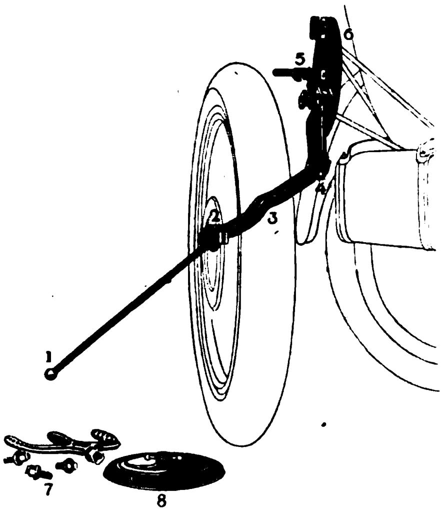
LAWRENCE CARRIER.

One important part of that never very pleasant job of tire changing is the lowering and lifting of the spare wheel and rim from the carrier on the rear of the car. Many women and young persons nowadays are called upon to be tire changers and the operation is often difficult for them. The Lawrence tire carrier is said to be the first and only mechanical means for lifting and lowering spare disc wheels and rims.

Normally acting as a tire carrier, it carries wheel and tire on the rear of the car against a carrying plate, secured by three bolts screwing into carrier plate lugs. Fitted to bottom of the plate is an elevating seat, and this is operated by a short lever handle, which is removed when not in use. An easy downward push of lever slides the wheel, with bolts removed, down the elevating seat to the ground. The operation of mounting a wheel on the carrier calls for an easy lift of the lever, and the fitting on of the cover plate over the hub completes a very neat appearance. Manufactured by Lawrence Carrier Corp., 20 East Lake St., Chicago.



LAWRENCE CARRIER.



THE LAWRENCE CARRIER.

1—Handle to lift and lower the spare wheel. 2—Elevated seat on which wheel is raised and lowered. Load is taken off this when the wheel is bolted in place. 3—Lever, which when raised to upright position by the handle, carries wheel into place against carrying plate. 4—Pivot or hinge pin. 5—Spring catch, holding wheel in place while bolts are put in. 6—Carrier plate, interchangeable with present wheel carrier. 7—Bolts which fasten wheel to carrier plate lugs. 8—Cover plate.

WHITMORE'S LUBRICANTS.

Whitmore Mfg. Co., Cleveland, headed by S. W. Whitmore, has perfected a type of lubricant for transmissions and differentials, which will retain its consistency at any temperature, from 10 degrees below zero to 300 degrees above. He developed its adhesive quality to an extent where it could be flattened out under enormous pressure, to an extremely thin film without breaking.

It is claimed for Whitmore's lubricants, and substantiated by tests at the Panama emergency dams; by Hudson Motor Car Co., Detroit, under racing conditions; and by engineers of big industries, that they will prolong the life of gears 500 per cent. It is claimed also that if housings are tight, with no leakage, one filling will last more than a year. Then the lubricant may be drained off, strained, and used over and over again.

Whitmore's is not new, although recently placed on the open market. For 29 years entire output has been absorbed by automobile manufacturers, railroads, electric lines, manufacturers of printing presses, and other big industries. It costs more per pound than ordinary lubricants, but is really economical, because one filling in transmission or differential lasts so long.

"101 ECONOMIES."

Attractively and informatively illustrated to describe every single operation, One Hundred One Economies for the Motorist has been published by Tide Water Oil Sales Corp., 11 Broadway, New York, refiner of Veedol motor oils. This 64 page book, states E. W. Emerson, sales promotion and advertising manager, starts in where the average instruction book leaves off. It tells the car owner not only to lubricate his springs, but gives two or three different methods of doing so. It tells of more than 101 uses of oil, grease, kerosene and gasoline that repay many times over in excellent service and economical operation.

A HUDSON-OWNED PHRASE.

Hudson Motor Specialties Co., Philadelphia, announces that its right to be exclusive user of the descriptive phrase "crank case repair arm" for devices sold as engine supports for automobiles has been sustained in the district court of Northern Ohio. Hudson brought suit successfully against four companies, Simons Mfg. Co., Lake Erie Accessories Co., M. & M. Co., and American Signal Co.

The most dangerous crossing is double crossing.—L. A. Record.

"BUY RELIABLE PARTS FROM RELIABLE FIRMS"

Quick service, right price and quality goods are always available from the distributors and manufacturers listed below—each a specialist in his respective line.

The Wilkinson Axle Shaft

Manufactured by
THE WILKINSON AUTO PARTS COMPANY
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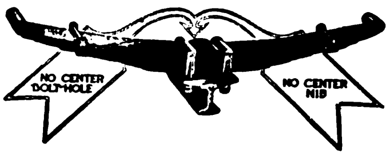

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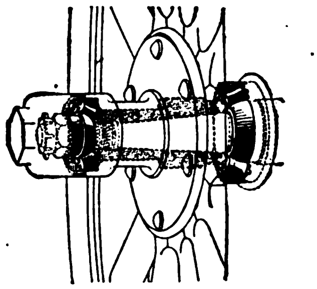

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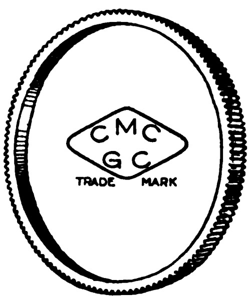

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The King Bee Spark Plug

WILL FIRE PERFECTLY IN OIL PUMPING CYLINDERS

They Will Not Foul from Carbon

The Porcelains will never crack or break.

They give More Power—More Mileage.

Every Plug Guaranteed to Fire Perfectly for 1 Year.

Made in All Sizes for Pleasure Cars—Trucks—Tractors.

They Increase the Spark About 100 per cent.

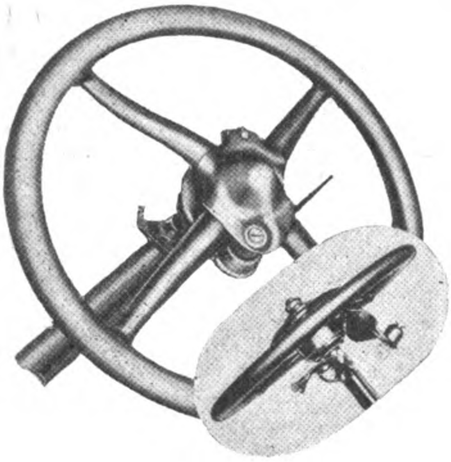
Agents and Distributors Wanted.

King Bee Spark Plug Co.

1006 So. Hill St., Los Angeles
Telephone 15706

MOTORIGHT LOCK.

The standard stolen Ford is particularly hard to trace and is most frequently stolen. The Motoright lock, made entirely of tough steel with a glass-hard surface, is a real foe to the car thief. When locked it covers the hub of the steering wheel and grips all four spokes. A glance tells whether or not it is locked.


MOTORIGHT LOCK.

It screws on in place of the steering gear cover, and can be installed with wrench and a hammer in 5 minutes. Arrangement of the standard Ford parts is not changed, and there are no plungers or inside parts to get out of order or interfere with the steering. The key slot is above the wheel, in front of the driver, so there is no fumbling around with the key.

Because of its patented design, it is claimed to be the lowest priced lock on the market carrying the Underwriter's Laboratories approval. The lock actually costs the Ford owner nothing because the 15 per cent saving in insurance more than offsets the cost of the lock, $4.90, according to the manufacturer, Packard Engineering Co., Cleveland. Motoright locks will soon be available for other cars.

SPOTLIGHTS FAVORED.

To correct mistaken ideas concerning the legal requirements surrounding the use of spotlights by motor vehicle owners, S & M Lamp Co., 118 W. 36th St., Los Angeles, quotes several of the opinions delivered by California and national traffic and police authorities.

According to the California attorney general: "Spotlights are legal in the state of California. The only limitation placed upon the use of a spotlight is that regulating the maximum height of the main, substantially parallel beam of light directly ahead of the vehicle carrying the same, and there is no limitation upon the use of a spotlight as to the height to which the main, substantially parallel beam of light may be raised when directed to either side of the vehicle and roadway."

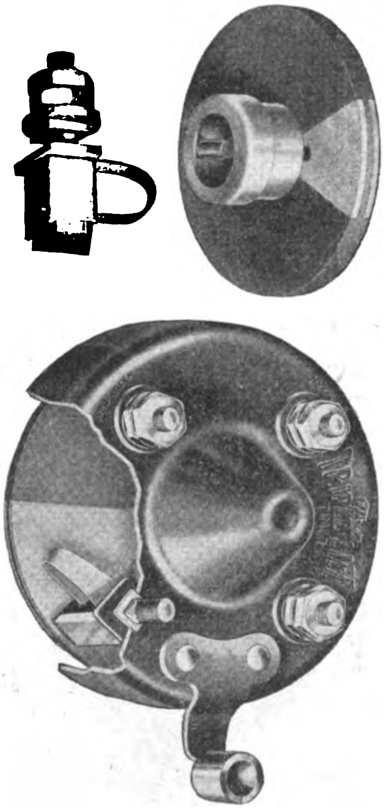
Says the district attorney of Ventura County: "I have just received a ruling from the attorney general which holds that spotlights are permitted under the California law when properly constructed and adjusted." He informed S & M Lamp Co. that its "legal bracket" made the spotlight comply with the law's provisions, and there could be no further question as to the legality of the Spot-Lite, the product of the company.

At the safety exhibit of the National Traffic Officers' Association, August 23-27, 1920, S & M Lamp Co. was presented with a certificate of honorable mention, approving the S & M Spotlite as a safety device, with the signatures of the association's president and secretary, Daniel A. Sylvester and W. L. Wadham.

TRIPLE-LIFE TIMER.

Appearance counts for something even under the Ford car hood, and the highly polished gun metal finish of the copper plated Triple-Life timer, when installed, gives a trimness which persuades the car owner to keep other engine parts up to a similar standard of neatness and efficiency. The indestructible timer shell is of 16 gauge cold drawn rolled steel. The design eliminates vibration and chattering, it is claimed. Cone is shaped to take either Ford or Fordson timer clip. Terminals are identified by numerals and name of corresponding wire colors. There is no oil hole, as oiling is not necessary.

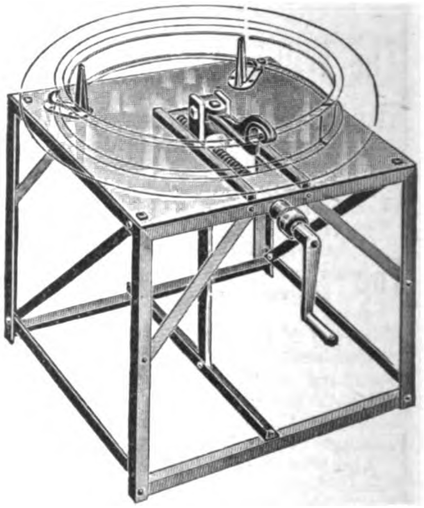
The copper brush is of a high grade, long life composition, with both ends alike, so it may be reversed end for end in brush holder, rendering thousands of miles of service without noticeable wear, it is claimed. Brush face is so designed that it meets and leaves the segment on a straight line, preventing an arc at all times. It has a phosphor bronze spring and brush holder of drawn polished copper. All parts are locked positively by a square-shouldered screw. In the rotor assembly the disc is of fine grade wear resisting fiber, with wide copper contact segments. Both sides are alike so rotor may be reversed to give double service. They are kept clean by centrifugal force, and do not develop a glaze to interfere with efficiency. Price $3.75. Manufactured by Mapson Mfg. Co., 2931 Stephenson Ave., Los Angeles, maker also of Perfection valve lifters.


TRIPLE-LIFE TIMER.

Another candidate for the Poison Ivy club—the chap who overdoes the use of the word "unit."

LITTLE GIANT RIM TOOL.

The Little Giant rim tool comes mounted on a rugged stand of angle steel, nearly 3 feet high, with bar steel braces, and may be placed in any convenient place in the shop or garage. The heavy sheet steel top forms a handy place for small tools. However, the most important item is the tool itself. The tire holding the split rim to be removed is placed on the stand. The forward arm of the tool is hooked onto the rim channel edge. Turning the crank handle projecting from the top of the stand causes the forward arm to swing to the right, coiling the rim into a smaller perfect circle, instead of merely pushing the end in, and insures an even, all-around contraction, so that springing of the rim is impossible, it is claimed. Three hooks mounted on top of stand hold the rim rigidly, while remaining an equal distance apart, regardless of shrinkage of the rim circle. Any mechanic can remove a split rim from a tire in a minute or less, according to the manufacturer, Marquette Mfg. Co., Saint Paul, Minn.

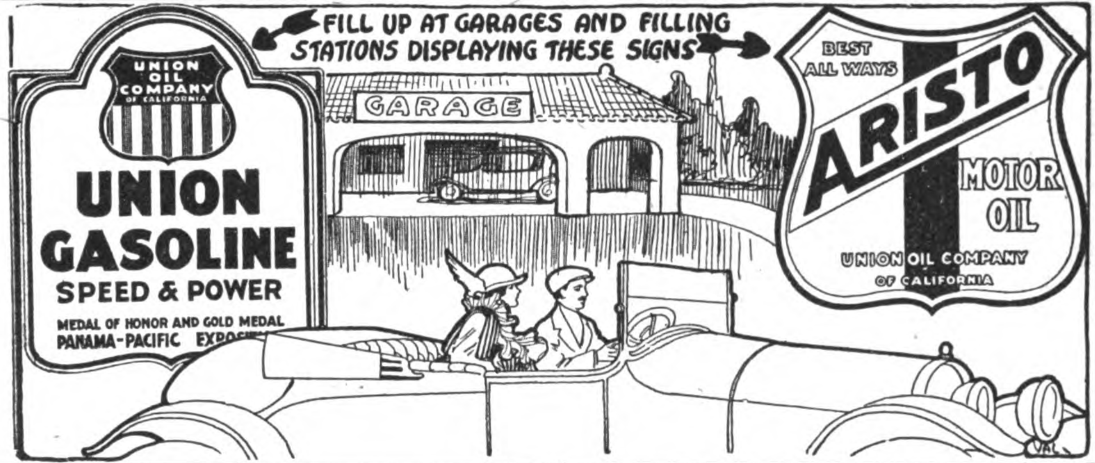

LITTLE GIANT RIM TOOL.

AIR COMPRESSOR SCIENCE.

Few among automobie tradesmen and the general public realize to what an extent the design and manufacture of air compressors calls for a science of its own. It has expanded abreast with the automobile industry, but it had its own pioneering period and discouragements, solid growth, and final solid establishment in the thousands of automobile establishments througout the country. Brunner Mfg. Co., Utica, N. Y., which recently opened a Pacific Coast branch, at 607 Santa Fe Building, San Francisco, has issued an air compressor handbook which in a score of interesting pages throws much light on the complexity of the problems which the company's own and other engineers have met and overcome in developing this faithful servant of the garage and tire shop to his present high efficiency. Admitting frankly that there still is wide differences of opinion among the various manufacturers, the company states that the subject matter of its handbook has been approved by engineering heads of the Massachusetts Institute of Technology, Boston, and of the Armour Institute of Technology, Chicago.

J' ever know this? Hand-written matter, not actual personal correspondence, doesn't need letter postage.

Say it with service.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SPEED & POWER
MEDAL OF HONOR AND GOLD MEDAL PANAMA-PACIFIC EXPO
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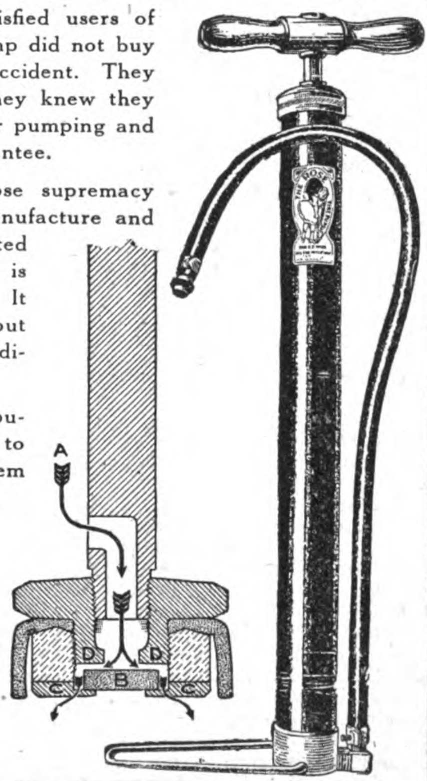
Three million satisfied users of the Rose Tire Pump did not buy their pumps by accident. They bought because they knew they were buying easier pumping and a Five Year Guarantee.

The secret of Rose supremacy lies in careful manufacture and the famous patented valve. The valve is the labor saver. It makes easy work out of an otherwise tedious job.

Profit by Rose popularity. Ask 'em to buy and tell 'em about the valve.



FRANK ROSE MFG. CO.
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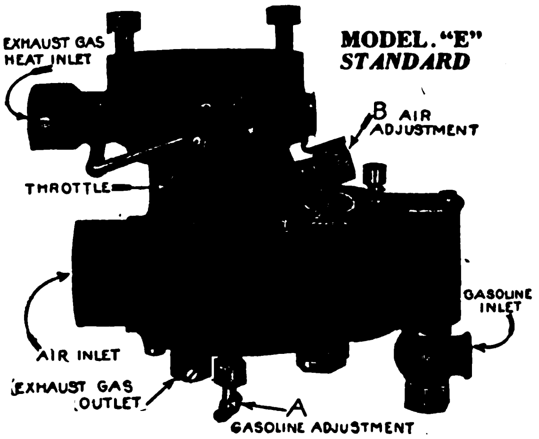
EXHAUST GAS HEAT INLET
B AIR ADJUSTMENT
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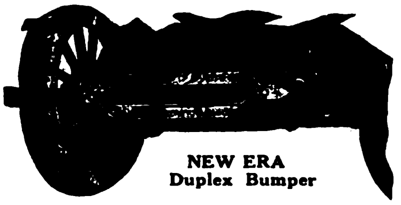

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Duplex Bumper

Not all bumpers are so approved. Means lower collision insurance rates to owners of cars equipped with NEW ERA BUMPERS. Their massiveness, beauty and almost incredible strength make them most desirable. Permanently guaranteed, too, which is not general. Also lower priced. Dealers who tell the whole story sell NEW ERAS with ease.

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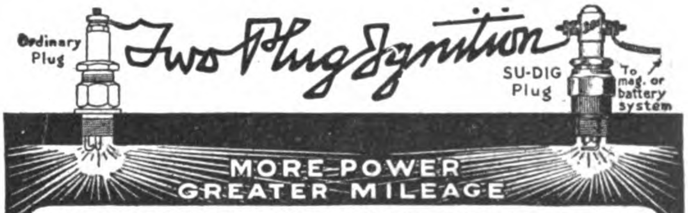
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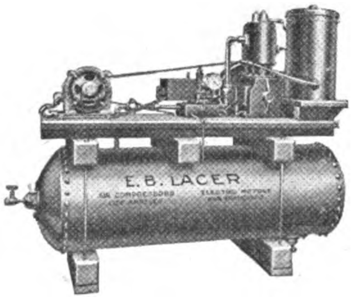
Two Plug Ignition
SU-DIG Plug
To mag. or battery system
MORE POWER
GREATER MILEAGE

DO YOU UNDERSTAND TWO PLUG IGNITION—the system that ignites the gas at two opposed points at once? This burns the mixture completely and almost instantly; increases power and gasoline mileage; saves fuel and lessens carbon accumulation and spark manipulation. SU-DIG Series Spark Plugs added to the plugs now in your engine, give Two Plug Ignition. A wonderful improvement in the running of your car. No change in present system required. Write for booklet, "How to Get More Power." If your dealer does not handle SU-DIG Series Plugs, write Chanslor & Lyon Co., S. F., L. A., Fresno, Oakland, Seattle, Portland. McCoy Motor Supply Co., San Francisco, Los Angeles, Superior Motor Power Co., 77-A Spring St., N. Y.

SU-DIG



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If it is Compressed Air 1 to 80 cu. ft. of air per min.

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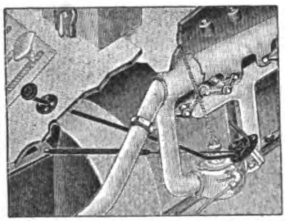

Every Ford Owner needs a Foot-Accelerator. Safe driving demands it. Needs only to be seen to be sold, and any dealer who fails to show an EWALD ACCELERATOR where his trade will see it, is wasting golden opportunities for easy sales and satisfactory profits.

The Ewald is unaffected by road jolts and jars.

Dealers and Jobbers—Write our sales dept. today for full details

Manufacturers
Romort Mfg. Co.
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Price 75c

Sales Dept.
THE ZINKE CO.
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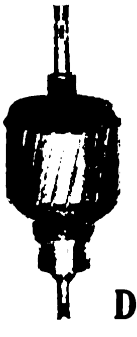
—something new—



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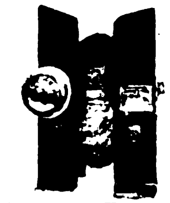
Percentage of "Come-Backs" is less than 3%.
Exchange service is of 95% efficiency.
Stock is the largest of its kind in the world.
Workmanship and materials cannot be excelled.

We Rewind AND REBUILD Armatures

For Automobile Starters and Generators

2-Year Guarantee

Write for Price List and Discount



Dynamo-Electric Wks.

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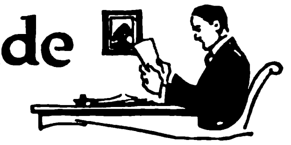
Armature Tester Ten Dollars Net

Western Trade Notes



Tacoma, Wash.—Progressive Sales Co. Inc., headed by J. E. Drain and F. G. Bengsston, national distributor of McDowell shock absorbers, has moved to larger quarters, 1213 A St.—"Count" A. D. DeCastellane, former sales manager of Richardson Motor Co., Chandler and Cleveland agency, has been advanced to general manager.

Vancouver, Wash.—Lineham Motor Co. on Washington St. has taken the Samson truck and Samson tractor agencies.

Renton, Wash.—F. A. Robertson has moved his increasing garage business into a new concrete garage he has built on Renton Way.

Long Beach, Cal.—Johnson & McGuire have opened a Chevrolet agency on East Anaheim St.—Wm. E. Garner and C. I. Dockstader have opened a service station for Long Beach Tire & Rubber Co., 225 Locust Ave.

San Pedro, Cal.—Western Auto Supply Co. has opened a store in a new building on Pacific Ave. near 4th St.—Harry Phillips, Dodge Brothers dealer, has moved into a new building on 7th St.

La Habra, Cal.—J. C. Howard has opened a Ford and Fordson agency.

Fullerton, Cal.—Western Auto Supply Co. has opened a branch store in Nicholas Block.

Riverside, Cal.—C. A. Chamberlain has bought Hussey Garage on Main St. from C. L. Hussey, Chalmers agent, and has added the Maxwell agency, buying it from Grace Motor Co.

Orange, Cal.—Martin's Garage on Chapman Ave. has been bought by Sisson Brothers.

Newport Beach, Cal.—Ed Epperly has sold East Newport Garage to Andrew Wilson.

Columbus, N. M.—Columbus Motor Co., A. J. Evans manager, is now doing a general sales and repair business.

Winnemucca, Nev.—W. L. Brackett has bought Winnemucca Battery & Tire Station and has changed the name to Humboldt Motor Sales Co.

Fallon, Nev.—J. C. Taylor of Fallon Motor Sales Co. has added an automobile painting and finishing department to his business.

Ogden, Utah.—Wattis-Kimball Motor Co. succeeds Binford-Kimball Motor Co., W. H. Wattis buying Binford interests; he is prospective candidate for United States senator.

Victorville, Cal.—Seals Brothers have opened their large new garage on Seventh St. and have added the Ford car and Fordson truck agencies.

Coalinga, Cal.—Frank Bowden has leased the repair and storage department of Prough Chevrolet Agency and will conduct it as a separate business.

Bishop, Cal.—H. P. Beatty, formerly with Watterson Brothers Garage, has become service manager for Crescent Garage. Studebaker agency.

Dinuba, Cal.—H. H. Harness will open an automobile accessories store in a building now being erected on East Tulare St.—Beckman Brothers have opened a Ford and Fordson agency in Wrightman Bldg.

Selma, Cal.—Fresno Tire & Rubber Co. has had construction started on the first unit of its new tire and tube making factory, Whitson and 2nd Sts.

Tulare, Cal.—W. C. Cantrell has bought Ford Repair Shop, sales and service agency for Ford cars, from Roy Templeton, his former employer—E. E. Fetterhoff and C. C. Crane, formerly located at the Dodge Agency, have moved to Midway Garage and opened a general automobile repair shop.

Watsonville, Cal.—Rodgers & Bielby of Corner Garage will have an $8000 brick garage erected for them on Pajaro St.—George Clough has bought back Pajaro Garage from C. L. Laughman, to whom he sold it a year ago.

Los Banos, Cal.—D. R. Wedgewood, former manager of Maino Motor Sales Co., has taken over the business of Buick Garage, agency for Buick and Cadillac cars and White trucks.

Santa Maria, Cal.—Crescent Garage has added the White truck agency for northern Santa Barbara County and has made J. W. Schendel truck sales manager.

Ventura, Cal.—M. H. Wolff has taken the Service truck agency for Ventura County.

Van Nuys, Cal.—Harry B. Watson Co. has opened at 214 Sherman Way with the Buick agency for San Fernando Valley.

Escondido, Cal.—Oscar Hall & Co. have opened Ford & Lincoln Garage in the H. T. Lyon Bldg.

Imperial, Cal.—B. B. Garage has been opened here with the Maxwell and Chalmers agencies by A. R. Anderson and B. B. McChristy.

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Immediate exchange on all sizes and types.

Distributors Hess-Bright New Bearings.

Ahlberg Bearing Company

1708 S. Grand
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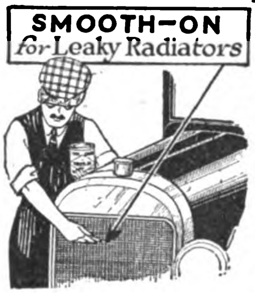
SMOOTH-ON IRON CEMENTS

No More Expensive Repair Bills



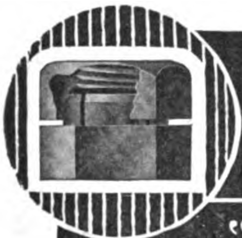
With Smooth-On Iron Cement No. 1, you can repair leaks in radiators, radiator edges, etc., both on honeycomb and tubular types, from the outside, without removing the radiator, at a few cents' cost.

Write for booklet, "How to Repair Motor Radiators"—it will show you how to make radiator repairs and other repairs around cars easily, quickly, and economically—it's FREE.

Smooth-On Iron Cement No. 1 comes in 6-ounce, 1-pound, and 5-pound tins. Also in larger sizes.

Dealers: Write for particulars on this live proposition.

SMOOTH-ON MFG. CO.
Dept. 38-H Jersey City, N. J., U.S.A.



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"Never Jar Loose"

SPECIFY ON UPKEEP AND NEW EQUIPMENT

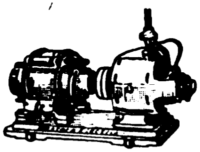
USED BY BEST MANUFACTURERS

WRITE FOR SAMPLE

DRAKE LOCK-NUT CO.
PLANTS: CLEVELAND SAN FRANCISCO

BETERBILT BATTERIES

There is a big demand for this efficient, low priced battery. We can make dealers an interesting proposition. Write for details.



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Distributors for Delco, Klaxon, Remy and Black & Decker products. Rewinding, Starting, Lighting and Ignition Experts. Batteries Re-charged. Manufacturers of Radio Equipment.

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SINGER PROCESS PISTON PINS

We Carry a Larger Stock of Pins than Any Exclusive Piston Pin Manufacturer in the United States

We Manufacture Piston Pins for all Makes Automobiles, Trucks and Tractors

Unequaled for quality. 200,000 in stock, ready for shipment to any point. Full particulars, prices and discounts mailed on request.

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STEPHENS

Salient Six

IT'S A GREAT CAR!

Now $1595 f. o. b. Freeport

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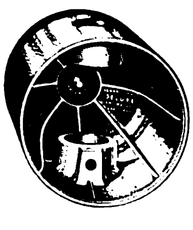

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for the name

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LIGHT WEIGHT CAST IRON PISTON

"The Successful Light Weight Piston" ©

See the reinforcing ribs running ACROSS THE HEAD to a reinforcing ring.

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MORELAND MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

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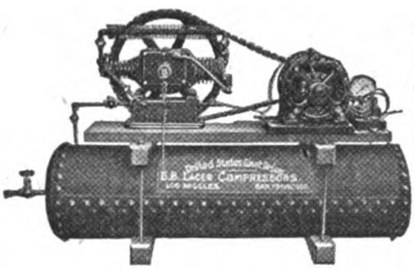
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST



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Reliable 10 years ago.
More reliable Today.

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The best with patented features

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The Piston Ring guaranteed against warping or loss of tension through heat. Warranted to last the life time of any motor upon which they are installed.
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AMERICA'S FIRST SUCCESSFUL CLOSE-FITTING ALLOY PISTON

Install KANT-SKORE PISTONS. A constant clearance piston, installed at the closest known fit. Give the car new life, more power, more pep, more miles per gallon of gas, and reduced oil consumption. A silent, flexible motor that responds eagerly to every touch of the throttle. A satisfied customer means more business for you—more money in your pocket. Are you getting it?

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REPAIRMEN, REGRINDERS, DEALERS: Before you stock pistons, write for price list of over 600 models of cars and trucks and our liberal proposition. Immediate service.

Kant-Skore PISTONS
WEIGH LIGHTEST · FIT TIGHTEST

MOTOR WEST

Reaches a larger percentage of dealers and repairmen than any automotive trade publication circulated on the

PACIFIC COAST

Portland, Ore.—Columbia Tire Corp. has secured permission to erect its first factory unit building at 1749 Albina Ave., to cost $80,000 and be 81x351 feet.—General Auto Supply Co., E. G. Crossett manager, has opened in a large store, Broadway and Couch St.—Marshall-Wells Co. has taken Pacific Northwest distribution of Sunoco motor oils.—A. B. Jordan and J. A. LeFevre, forming Mac-Dry Battery Co., Broadway and Hoyt St., will distribute Mac-Dry batteries through the three Northwestern states.

Boardman, Ore.—C. H. LaTourelle, Ford dealer, will have a $10,000 garage erected for him on 8th St. to house his business, Boardman Garage.

Chico, Cal.—J. H. Vaughan of Vaughan & Fordyce, Willard battery agency, has bought E. F. Fordyce's interest, and will again add an accessory department.—Moore Brothers, 5th and Wall Sts., have taken the county agency for Mac-Dry batteries.

Oroville, Cal.—Alva E. Hatch Auto Agency, dealer for Nash, Reo, Overland, Willys-Knight and Lafayette cars, has added the Hupmobile for Butte County.

Roseville, Cal.—W. F. Hombre has opened Hombre's Auto Trimming & Body Shop, 139 Riverside St.

Auburn, Cal.—New Service Garage has been opened by G. A. Lee and V. L. Rockwell, forming the partnership of Lee & Rockwell.

Yuba City, Cal.—Paul Demmer, F. E. Water and Clyde Taylor have taken over Guarantee Auto & Ignition Works on E St., changing name to Electric Hospital, and will handle all kinds of automotive electrical repairing.

Marysville, Cal.—Fred S. Moore has taken the Hupmobile agency for Yuba County, locating in Travelers' Garage.

Sacramento, Cal.—Sapp Vulcanizing Air Bag Co. has been formed with $25,000 capital stock by George Sapp, Joseph Rossi, John A. Brown and E. J. Hughes.—Flint Motor Co., capitalized at $25,000, is now Chalmers and Maxwell dealer for the county; G. M. Flint was former sales manager of George Campe Co., Daniels car agency in San Francisco.—Economy Piston Ring Co., capital stock $50,000, has been formed by H. D. Cutrell and William S. Newton to manufacture Economy piston rings here.

Ryde, Cal.—G. J. Picard has leased the newly completed Ryde Garage and has opened an automobile repair business and will handle one or two medium-priced cars.

Vallejo, Cal.—A. B. Coronado of Coronado Garage has taken the Wills Sainte Claire and Hupmobile car agencies.

Santa Ana, Cal.—White Garage, Inc., of Long Beach and Santa Ana, is to have a handsome brick 1 story garage erected for its branch here, distributing Haynes cars for Orange County, at 1st and Main Sts.—Forsythe Brothers, of Riverside and Santa Ana, retail accessory dealers, have doubled the floor space of their branch on North Main St. by extensive additions to their building.—Edgar & Hays have moved to a new location, Broadway and 6th St., where they have three times their former space for Paige, Jewett and Oakland sales.

Escondido, Cal.—Charles Smith has bought the Baker Garage, Grand and Juniper Sts., from John Baker.

San Diego, Cal.—Brown & Young have sold their repair shop to C. A. Canfield.—Ralph Knight has been appointed general manager of Maryland Garage, Maxwell and Chalmers agency.

Calexico, Cal.—W. H. Lewis has located in Big Four Garage with the Hudson and Essex agencies for Imperial County.

Douglas, Ariz.—Douglas Auto Supply Co., 531 9th St., has taken the agency for Michelin tires.—Southwestern Auto Exchange, headed by C. F. McCord, 9th St. and F. Ave., is now agency for Paige and Jewett cars, Savage tires and Monogram oils.

San Juan, Cal.—E. P. Giacomazzi is erecting a new garage on Starr Ave. with 10,000 square feet and will operate an automobile agency and accessory store.

King City, Cal.—Ross N. Hollinbery, owner of a large garage in Fresno, has bought Highway Garage here, to operate it as a branch.

Lompoc, Cal.—N. L. Spanne has bought Pioneer Garage from G. A. Wickersham.

Ventura, Cal.—Ralph Current has bought Mercer Garage from Hill & Hill.—R. C. Coleman has sold his interest in California St. Garage to F. Cordez of Ventura Garage.

Glendale, Cal.—Casa Verdugo Garage on North Central Ave. has been leased by F. Guehr and C. W. Bremberg.

Pasadena, Cal.—Hal E. Thompson has bought the Oldsmobile agency here from A. J. Mayer.

Los Angeles, Cal.—Weaver-Mason-Thompson Co., body builders, will have an $80,000 2 story brick sales and service building erected for it on Washington St. near Union Ave.—Beatty & Schuessler have opened a sub-agency for Oldsmobile and Columbia cars, 7156 Hollywood Blvd.—Tom R. Johnson has opened a Chevrolet agency, 5518 Hollywood Blvd.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON RINGS PISTON RINGS

OIL KONTROL
PATENT APPLIED FOR.
RINGS

CONTROL the OIL CONTROL your TRADE

QUALITY Largest Profit RELIABILITY

All distributors for the genuine and original OIL KONTROL Piston Rings are appointed direct from the factory. Samples furnished jobbers and distributors

SUNSET MANUFACTURING CO., 1328 East Sixth Street
Los Angeles, California

SPRINGS

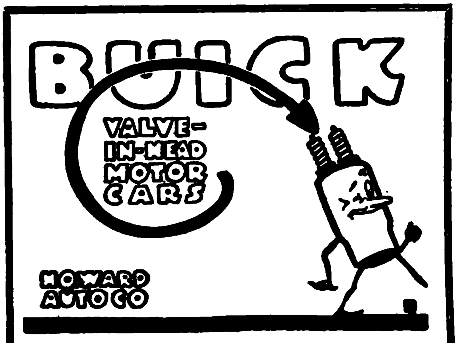
CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS

"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof

FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
Pacific Coast Distributors
Madison "Oil Kipps"

Main 3733. 916 So. Los Angeles St.

AUTOMOBILES



1323 S. Flower St. Los Angeles

HELP WANTED

COMMISSION SALESMEN wanted for fast selling accessory for Ford cars, trucks, tractors. Excellent side line. Box 337, New Holstein, Wisconsin.

FORD VALVE ADJUSTERS

TOWNSAN VALVE ADJUSTER
Best little accessory ever put on a FORD
and the price is a trifle
WESTERN AUTO-SUPPLY COMPANY
PACIFIC COAST DISTRIBUTORS
Write for Open Territory
Manufactured by
CHADBOURNE SALES CO.
1024 Ramsey St. N. E. Minneapolis, Minn.

BUSHINGS

BUSHINGS—BRONZE Machined to Size or Rough Castings
Impellers, Packing Nuts and Pump Shafts
Phillips Bronze Bushing Works
1460 E. Washington St., Los Angeles, Cal.

CYLINDER SCOREFILLER

SCORED CYLINDERS
In auto and all internal combustion engines can be repaired easily and permanently without heating or machining with STAR BRAND SCOREFILLER. The Scientific Synthetic Gritless metal cement. Hundreds of satisfied users. Guaranteed. $3.50 per box. Postpaid.
BRADY-ADAIR COMPANY
Distributors
574 Golden Gate San Francisco

Who Is Mr. Branigan?

A mysterious stranger answering to the name of Branigan, well dressed, suave, plausible in manner, but elusive in the matter of address, recently caused some slight embarrassment to various departments of Earl Motors, Inc., Jackson, Mich., by calling on Detroit concerns and placing fictitious orders for material which the company does not want and cannot use.

What his object is, and why he should thus inconvenience himself in behalf of a company on whose payroll he does not appear, is a mystery.

He ordered from the Detroit Awning Co., a full set of awnings for Earl Motors' "new building"—a building conceived in Branigan's own fevered brain, and built of thin air. From the United Fuel and Supply Co. he requested immediate shipment of 900,000 yards of gravel—a commodity very little in demand at the Earl plants. At the Union Drawn Steel Co., he increased the company's order for a special kind of steel from 1000 to 3000 pounds. Introducing himself to officials of the Detroit Screw Works, he demanded to have all Earl blueprints shown to him. These he checked over carefully, authorizing certain changes.

Furthermore, he had made arrangements with one of the lake transportation companies to ship 450 Earl cars to Chicago and Milwaukee. Had he succeeded in shipping these cars, the Chicago and Milwaukee distributors would have been highly pleased, as even with the factory working night and day, it is impossible to meet fully the demand for Earls.

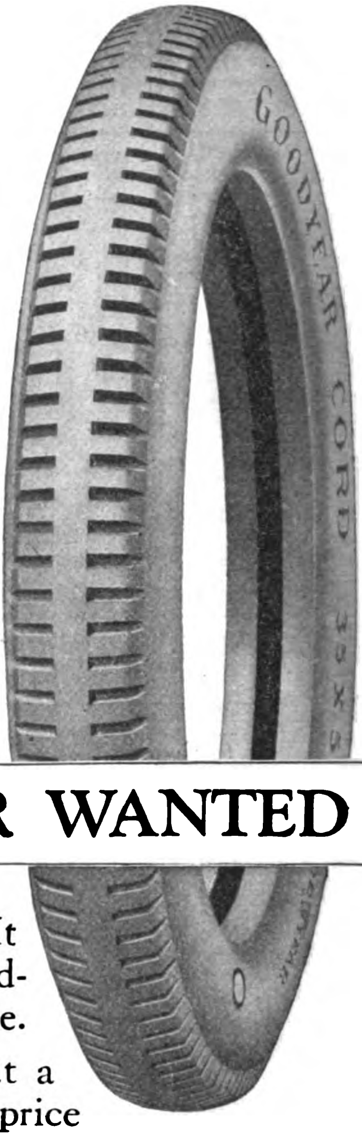
To the advertising department, too, has come word of Branigan's activities. Two Detroit firms recently sent representatives to Jackson at his request, one with the information that Mr. Earl wanted to see him on something very important. When asked, of course, Mr. Earl knew nothing about it. Another concern in Detroit called by long distance to inquire about a large order for electrotypes that was, according to Branigan, to be placed at once.

A well known printing house also was the victim of the practical joker to the extent of receiving an order for 10,000 menu cards for a banquet. An Earl order number was quoted by Branigan, but upon investigation the order in question was found to call for a quantity of high grade bronze bushings to go into the Earl car.

Latest reports come from two well known Detroit ventilating concerns; also two more printing houses, from all of which he requested bids on large quantities of work in their respective lines.

Detroit manufacturers have been warned not to heed the fanciful requests of the mysterious stranger, and to inquire into the credentials of any person not known to them, and purporting to be a representative of Earl Motors, Inc.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.



The new Goodyear Cross-Rib Tread Cord

THE TIRE EVERY DEALER WANTED

To Goodyear Dealers is given the very tire every dealer has long wanted—a genuine cord tire of reputable make with an honest list price lower than the net list price of many "long discount" tires.

It is known as the Goodyear Cross-Rib Tread Cord.

Like the famous Goodyear All-Weather Tread Cord, this new Goodyear Cord is liberally oversize.

Its foundation also is of high grade, long staple cotton. It has the patented Goodyear group-ply construction. It is a real Goodyear Cord Tire.

Yet it sells at a much lower price than any other standard cord!

From the complete Goodyear line, the price, quality, and mileage demands of any car owner can now be filled by the Goodyear Dealer.

If you want to be a Goodyear Dealer, and profit by the increased market for Goodyear Tires, write today to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

QUALITY SNAP RINGS

"Cast to Last"

Easy to Install
Quick Seating
Long Lived
Accurate

DEPENDABILITY REPUTATION AUTOMOTIVE EQUIPMENT ASSN. JUSTICE QUALITY

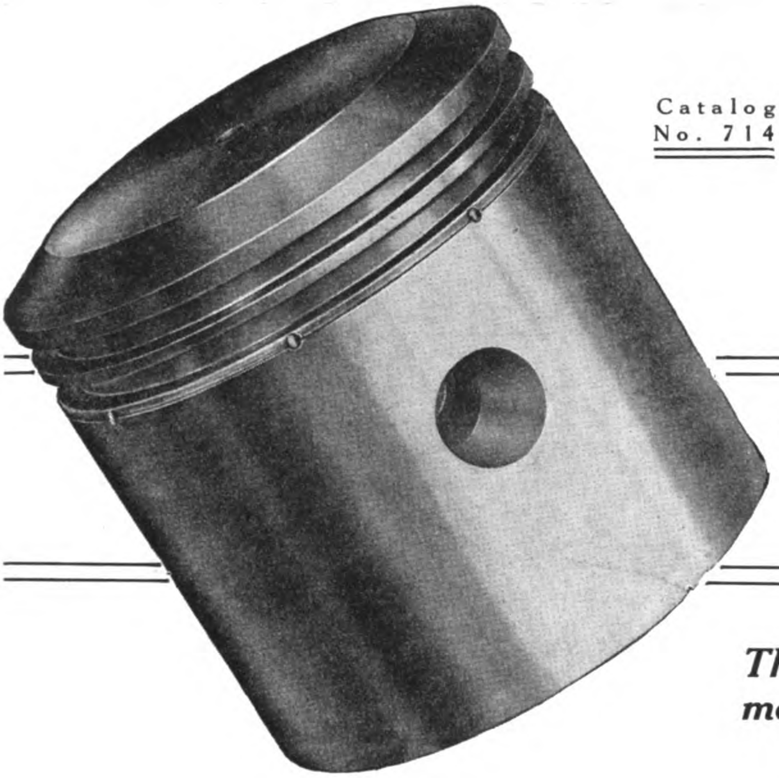
During June—
2,607,743 QUALITY Piston Rings were manufactured and shipped—an average of 11,352 rings each and every working hour.

This overwhelming preference for better piston ring service should influence all manufacturers and jobbers who profit by the experience of others.

More Than a Million a Month

QUALITY
SNAP RINGS
The Piston Ring Company
Muskegon, Michigan
QUALITY
QUALITY
SNAP RINGS
12-4 1/2 .015 OVER SIZE X 5/16

THE Piston RING COMPANY
MUSKEGON, MICH.



Catalog
No. 714

Here Is
The New

DELUXE
LIGHT WEIGHT CAST IRON PISTON
The Successful Light Weight Piston ©

SPEED
SPECIAL

"the ONLY Real FORD Piston!"

That was the Enthusiastic Comment of the SMITH MACHINE WORKS, El Paso, Texas

HIGH LIGHTS

WEIGHT—Only 19 ounces!

RINGS—Just two; 3/16 inch each, reducing ring friction 50%.

COMPRESSION — Regular Ford (1 15/16 inches).

THE METAL — Highest Quality Electric Melted Cast Gray Iron.

CONSTRUCTION — Regular DELUXE — Scientifically Reinforced.

DELUXE
LIGHT WEIGHT CAST IRON PISTON
The Successful Light Weight Piston ©

DELUXE PISTONS—are famous the world over for their scientific construction—securing greater strength with less weight. 40% to 55% lighter than ordinary factory pistons—yet made of cast iron—they give greater efficiency, more power, pep and speed. Supplied for over 1,500 miscellaneous motors. The most up-to-date line of pistons on the market. Twenty-four hour service to all points.

THEY WRITE—"In the freight shipment which we received yesterday were the SPEED SPECIAL Fords, No. 714, which we were very much pleased with and believe is the **only real** FORD piston."

YOU'LL SAY THE SAME!—After you have investigated—especially after you have tried out a set.

The DELUXE SPEED SPECIAL is the lightest, most scientific cast iron piston ever made for the Ford car. It's built for power, pep, speed and highest efficiency in every type—Touring, Roadster, Coupe, Sedan, Speedster, Racer! Having only two rings, 3/16 in. each, ring friction is reduced 50%! Highest ring efficiency is thus obtained, and the extreme light weight eliminates vibration. Equalized bearing surface and close fitting prevents piston slap, loss of compression, gas and oil wastage. Ultra-scientific in every respect. You'll say it's the ONLY piston for the Ford, too, when you see it. Sells for only........................

2.75 Semi-finished

OUR DELUXE FORD NUMBERS ARE

No. 14	(Standard)	Weighs 24 oz.
No. 314	(1/32 in. Oversize pattern)	Weighs 24 oz.
No. 414	(1/16 in. Oversize pattern)	Weighs 24½ oz.
No. 514	(Bronze-Bushed Standard)	Weighs 28 oz.
No. 714	(DELUXE SPEED SPECIAL)	Weighs 19 oz.

Deluxe Pistons in Your Motor Will Bring You New Motor Economy and Satisfaction

CLARK - TURNER PISTON CO., Inc., Box 148, Station C, LOS ANGELES

Please let me know about your special proposition in connection with the DELUXE SPEED SPECIAL which assures me of volume sales on this number. I am also particularly interested in DELUXE Pistons for the__________

Model__________

Name __________ Address __________

I am a Motor Owner__________ Regrinder__________ Reborer__________ Repairman__________

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Solly Sol
down pour

every New Car Buyer is a Tire Cover Prospect

75,000 cars were sold in the Pacific States the first four months of this year.

More cars are being sold every day and somebody is going to get the profits from the sale of Tire Covers to these new owners. Tire Covers are a necessity—"Solly Sol" and "Down Pour" work for you all the time.

Accessory dealers and motor car dealers—here's your opportunity. Sell "Angelus" Tire Covers and win confidence along with making a satisfactory profit.

Angelus Tire Covers FIT—they WEAR and they are doubly GUARANTEED.

And the "Angelus" Painting process is something new. Any monogram or emblem can be reproduced in actual colors—the chance for the very best kind of advertising—let us tell you more about this process. But be sure you specify "Angelus" Tire Covers when ordering from your Jobber.

Uniform prices and discounts—a square deal and good business for everyone.

Angelus Tire Covers

the tire cover with
the Drain Holes

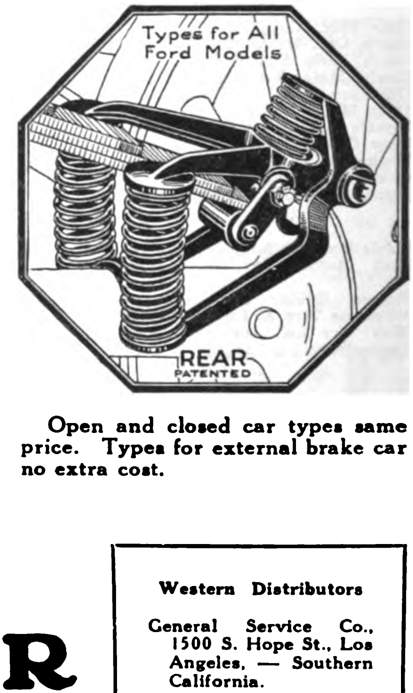
Parker & Waterman Mfg. Co.
Los Angeles
Makers of Tire Covers, Cushions.
Trunks and Covers.
Distributors everywhere.

BURPEE-JOHNSON PATENTED FloatAforD SHOCK ABSORBERS

The "third" spring is your Guarantee for Riding Comfort

It is the upthrow which puts you off the seat and makes hard riding. The famous "third" spring acting independent absorbs this rebound while the two coil springs function with the Ford Springs over the downward thrusts.

FloatAforDs work with the Ford Springs, for your comfort, as they are free to do so—no binding, clamping or riding on the Ford Springs. The "third" spring checks the annoying sidesway. Get a demonstration today. Convince yourself.


Types for All Ford Models
REAR
PATENTED

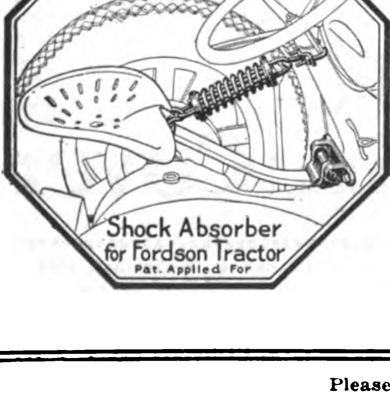
Open and closed car types same price. Types for external brake car no extra cost.

QUICK SALES—GOOD PROFITS

Hundreds of dealers turn their FloatAforD stock twice a month. Distributors in the western cities listed carry ample stocks for prompt shipments. Write them for literature, prices, and territory. Product fully guaranteed.

Our Dealer plan is most fair; only a small investment is required. Thousands of sets are in use today. Sell them on a ten-day trial refund basis. Rear shocks come fully assembled. Easily installed. No holes to drill.

Fordson Tractor SHOCK ABSORBER



This wonderful accessory gives comfort to the driver and insures a greater day's work from the tractor. Takes up all the bumps and jars from the rough ground in the fields or on the highway.

Made of high grade materials. Easily installed. No holes to drill. Every Fordson owner needs one. Write distributors for literature and prices.

Western Distributors

General Service Co., 1500 S. Hope St., Los Angeles, — Southern California.

W. B. Vestal, 357 Van Ness Ave., San Francisco,—Northern California, Hawaiian Islands.

Ballou & Wright, 1515 12th Street, Seattle, Wash.

Ballou & Wright, 89-95 N. 10th St., Portland, Ore. — Washington and Oregon.

Burpee-Johnson Company, Mfrs.

Canadian Office and Factory: 510 King St., East Toronto

1918 Singleton Street Indianapolis, Ind.

FREE Sharpening SERVICE

Sioux Service Keeps Cutting Tools Sharp—No Charge

KEEN cutting edges and accurate angles are absolutely necessary in Valve Reseating Tools. We keep Sioux Cutting Tools in perfect condition for you, at no cost except the carrying charges both ways.

Our special department is equipped and maintained to give this service to users of Sioux Tools only. We do not sharpen other makes of tools.

All Sioux Tools sent us for this Free Service, will be resharpened and returned to you the same day that we receive them.

Take Advantage of This Free Service

WHEN your Sioux Valve Refacing Cutters or your Sioux Valve Seat Reamers get dull, send them direct to us and they will be resharpened at no cost to you. Do not send them through the jobbers, as this only delays the service.

Be sure tools are properly addressed and contain your name and address. Prepay the postage and include sufficient return postage. You need not write us if you are careful to include return postage and address it as follows: Albertson & Co., Resharpening Dept., Sioux City, Iowa. Be sure your name and address are on the package.

Demand Sioux Tools

SAFEGUARD your interests by demanding SIOUX TOOLS and profit by this exceptional Service.

Users of Sioux Tools find it profitable to keep on hand an extra set of Sioux Reamers and Sioux Valve Face Cutters so that one set can be resharpened while the other set is in use.

Remember Sioux Service is for the exclusive use of Sioux Tool Users

All Live Jobbers Sell Sioux Tools

ALBERTSON & CO. - - SIOUX CITY, IOWA

THE SIOUX WAY Trade Mark Reg. U. S. Pat. Office

"Insures Bigger Profits Through Better Tools"

Bridgeport No. 16

for all size tires

Cylinder

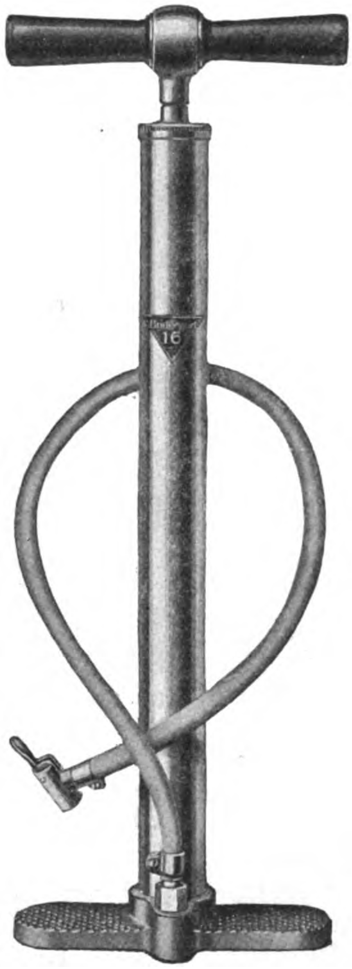
Seamless Drawn Brass will not rust. Perfectly finished inner surface insures smooth, easy operation of piston, and prevents excessive wear on leather bucket.

Piston

Equipped with patented bucket expander which automatically operates bucket under all conditions. High compression insured.

OtherFeatures

Leak-proof base connection
Check valve in base
Thumlock hose connection
Three ply long hose
Full grip handle



Easy Sales

because the superior features of the pump are obvious and quickly appreciated.

Appearance

clearly indicates the excellence of construction.

Performance

Superiority in construction details means better performance.

Guarantee

on material and workmanship protects you in your replacements.

List Price, $3.75

with liberal discount to the trade. Write for our sales proposition.

RUST-PROOF
LEAK-PROOF
Better-Built

Bridgeport Brass Company
Bridgeport 2315 **Connecticut**

Same Overhead—Increased Profits

Wire us—or mail Extra Profit Coupon below

SPEED up turnover. Cut down overhead. Make more sales with no additional expense. Increase profits.

How? *Sell Hayes Demountable at the Rim Wire Wheels.*

Every car owner *wants* wire wheels—has probably decided that sooner or later he will *buy* wire wheels. He has just been waiting for the *right* wire wheel. Be the first in your town who *sells* it.

The Hayes is the wire wheel motorists have waited for—the first practical demountable at the rim wire wheel.

Easy to install—convenient for quick tire change—light in weight—moderate in price—the Hayes Demountable at the Rim Wire Wheels sell at sight to every car owner.

Your field for sales is unlimited. Every owner of a Ford, Nash, Durant, Earl, Dodge, Chevrolet and other makes, is a prospect. Just demonstrate the Hayes Wire Wheels to them—they sell themselves, and what is more we *help* our dealers sell them.

Hayes has always stood for dependability in wheels. Of all the cars produced today, 54% are Hayes equipped. The immense resources which have made this achievement possible are back of Hayes Demountable at the Rim Wire Wheels. You can back them—we will back you.

Read the selling points. Learn why Hayes Wire Wheels are best from both standpoints—dealers and car owners. Convince yourself. Then wire us or send the coupon today.

Six Strong Selling Points

1. **One-piece steel felloe, of channel steel, well adapted for assembly of the wire spokes and gives perfect support to the rim.**
2. **Rim supported front and back by in-rolled bead, excludes dirt. Provides ideal attachment for lugs.**
3. **Tapered nuts fit countersunk holes in lugs and act as lock-nuts.**
4. **Lugs are made from mill-rolled bars. Riveting portion integral with lugs. No castings used.**
5. **Demountable rim lugs permanently attached to rim, eliminating driving studs.**
6. **Integral hub makes wheel interchangeable with wood wheel.**

HAYES WHEEL COMPANY *of New York* JACKSON, MICHIGAN

Branches: New York Chicago San Francisco Indianapolis

Stocks Carried in Principal Cities

WESTERN COAST DISTRIBUTORS

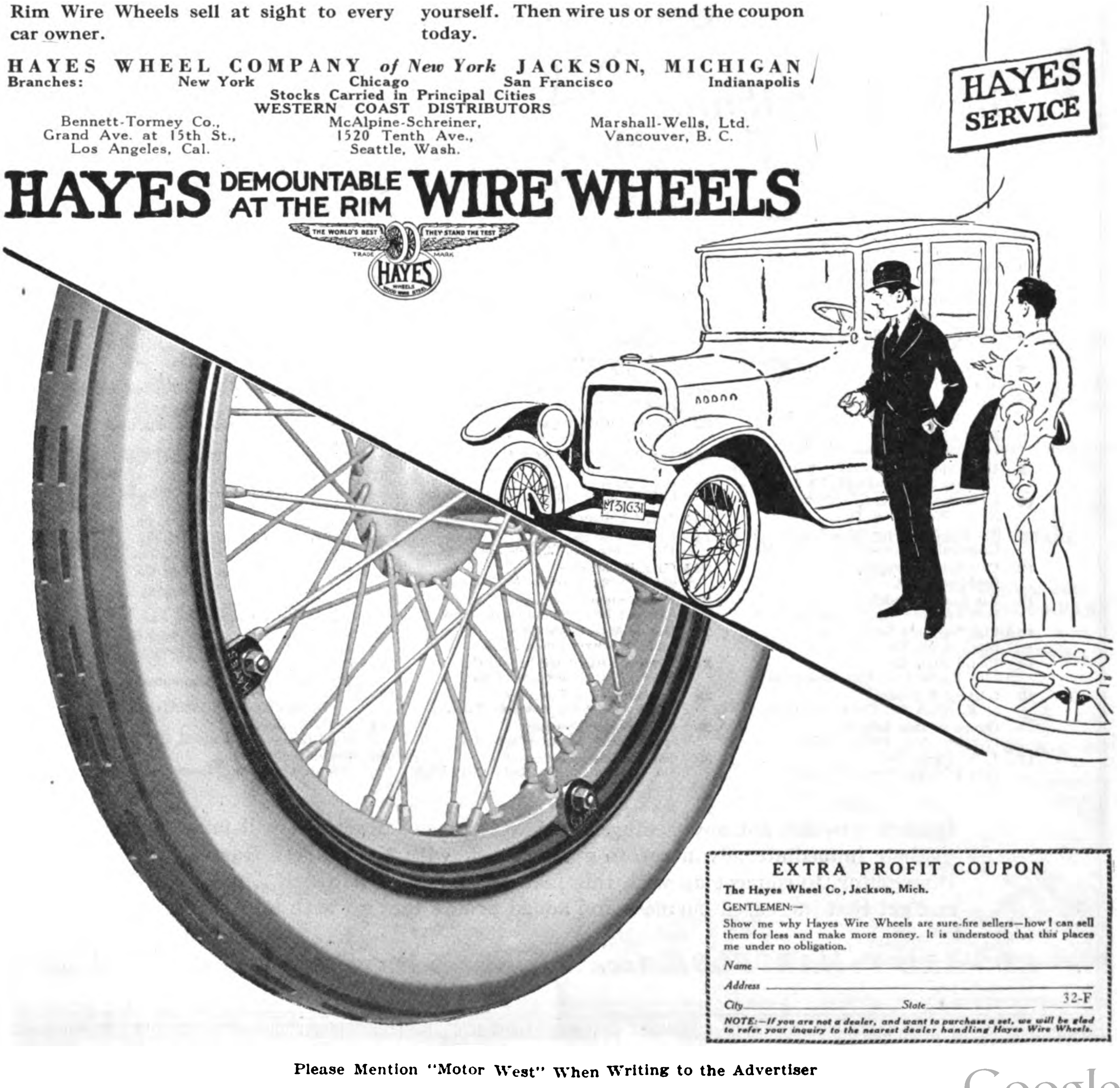
Bennett-Tormey Co.,
Grand Ave. at 15th St.,
Los Angeles, Cal.

McAlpine-Schreiner,
1520 Tenth Ave.,
Seattle, Wash.

Marshall-Wells, Ltd.
Vancouver, B. C.

HAYES DEMOUNTABLE AT THE RIM WIRE WHEELS

THE WORLD'S BEST THEY STAND THE TEST
TRADE MARK
HAYES



EXTRA PROFIT COUPON

The Hayes Wheel Co, Jackson, Mich.

GENTLEMEN:—

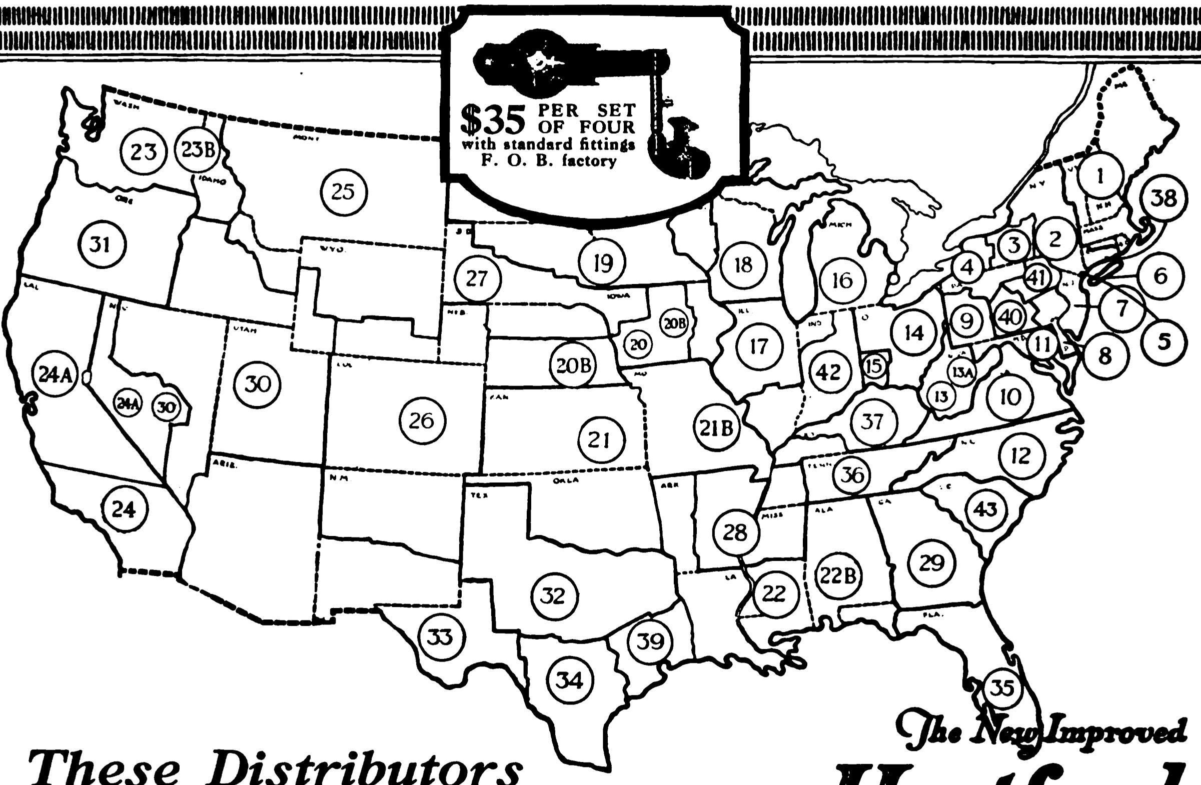
Show me why Hayes Wire Wheels are sure-fire sellers—how I can sell them for less and make more money. It is understood that this places me under no obligation.

Name ______

Address ______

City ______ *State* ______ 32-F

NOTE:—If you are not a dealer, and want to purchase a set, we will be glad to refer your inquiry to the nearest dealer handling Hayes Wire Wheels.



$35 PER SET OF FOUR
with standard fittings
F. O. B. factory

These Distributors now have

The New Improved

Hartford

SHOCK ABSORBER

"Makes Every Road A Boulevard"

1 Hartford Shock Absorber Agency
319 Columbus Ave., Boston, Mass.

2 Albany Hardware and Iron Co.
39 State St., Albany, N. Y.

3 Onondaga Auto Supply Co.
353 E. Onondaga St., Syracuse, N. Y.

4 Joseph Strauss Co., Inc.
215 Genesee St., Buffalo, N. Y.

5 New York Motor Supply Co., 112 Richmond Ave., Port Richmond (S. I.), N. Y.

6 Hartford Shock Absorber Agency
436 W. 57th St., New York City, N. Y.

7 Hartford Auto Products, Inc.
177 Central Ave., Newark, N. J.

8 Hartford Shock Absorber Agency
1437 Vine St., Philadelphia, Pa.

9 Dyke Motor Supply Co., Webster and Chatham Sts., Pittsburgh, Pa.

10 E. Wesley Tompkins, 2113 14th St., N. W., Washington, D. C.

11 The Lincoln Motor Sales, Inc.
Cathedral at Howard, Baltimore, Md.

12 Carr Spring Company
Goldsboro, N. C.

13 Van-Zandt-Leftwich A. S. Co.
1125 Fourth Ave., Huntington, W. Va.

13A Flat Top Auto Supply Co.
Bluefield, W. Va.

14 United Parts Co.
2352 Euclid Ave., Cleveland, Ohio

15 Gilchrist & Hoadly
21 E. Ninth St., Cincinnati, Ohio

16 George F. Balk Sales Co.
19 Selden Ave., Detroit, Mich.

17 J. W. Davis, Inc.
1716 Michigan Ave., Chicago, Ill.

18 Julius Andrae & Sons Co.
358-64 Broadway, Milwaukee, Wis.

19 Harrington Motor Co., 1635 Hennepin Ave., Minneapolis, Minn.

20 Hulsebus Hartford Co.
Seventh and Durant Sts, Harlan, Iowa

20B Hulsebus Hartford Co.
2427 Farnam St., Omaha, Neb.

20B Hulsebus Hartford Co.
Des Moines, Iowa

21 P. A. Sutermeister Supply Co.
1909 McGee St., Kansas City, Mo.

21B P. A. Sutermeister Supply Co.
2944 Locust St., St. Louis, Mo.

22 The Wainright Organization
641 Carondelet St., New Orleans, La.

22B The Wainright Organization
104 N. Royal St., Mobile, Ala.

23 Reynolds & Reynolds
755 Broadway, Tacoma, Wash.

23A Inland Battery Co., Spokane, Wash.

24 Henry Lansdale
1305 S. Figueroa St., Los Angeles, Cal.

24A Chas. H. Burman
955 Post St., San Francisco, Cal.

25 Northwestern Auto Supply Co., Fifth Ave. and Broadway, Billings, Mont.

26 Denver Auto Goods Co.
1600 Broadway, Denver, Col.

27 Western Battery and Supply Co.
619 Pearl St., Sioux City, Iowa

28 Southern Motor Company
627 Monroe Ave., Memphis, Tenn.

29 Crane-Baxter Company
Spring St. at Baker, Atlanta, Ga.

30 The Salt Lake Hardware Co.
257 S. Main St., Salt Lake City, Utah

31 Wiggins Company, Inc.
Couch and Park Sts., Portland, Ore.

32 Ferris-Dunlap Company
2029 Commerce St., Dallas, Tex.

33 Borderland A. S. Co.
817 Texas St., El Paso, Tex.

34 Ajax Rubber Co. of Texas, Inc.
San Antonio, Tex.

35 Lovejoy Sales Co.
904 Main St., Jacksonville, Fla.

36 Auto Supply Co.
1107-11 Broadway, Nashville, Tenn.

37 Robinson Bros. & Co.
609-11 W. Main St., Louisville, Ky.

38 Horton-Gallo-Creamer Co.
422 State St., New Haven, Conn.

39 Joseph F. Meyer Co.
802 Franklin Ave., Houston, Tex.

40 Front-Market Motor Supply Co.
109 Market St., Harrisburg, Pa.

41 The D. G. Nicholas Co.
122 Adams Ave., Scranton, Pa.

42 Van Camp Hardware and Iron Co.
411 W. Maryland St., Indianapolis, Ind.

43 C. D. Franke Co., Inc.
159-172 Meeting St., Charleston, S. C.

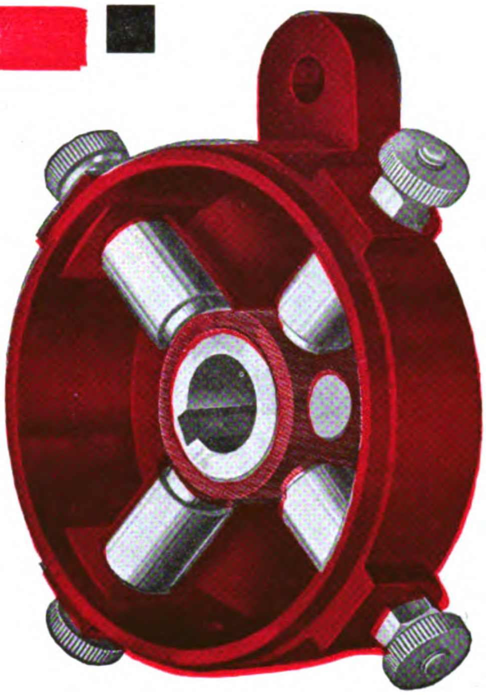
DOMINION OF CANADA

44 Lewis Brothers, Ltd.
20-42 Bleury St., Montreal, Quebec, Can.

45 Cutten & Foster, Ltd.
296-306 Church St., Toronto, Canada

Dealers who are not now selling the New Improved Hartford will find it to their immediate advantage to get in touch with the nearest Hartford Distributor, to connect up with this fast selling, efficient Shock Absorber, and get that increased business and added profits that go with a "leader."

EDWARD V. HARTFORD, Inc. ***35 Warren Street, New York***



The Best Persuader for a Balky Ford is a DALECO Timer

Trade Mark Registered

Did you ever struggle with a balky horse?

You got mad all over and would have given most anything for a good "persuader."

It's just so with a balky Ford. Some boob yells "get a horse" and you want to commit murder.

There is just one real persuader for a balky Ford—A DALECO TIMER.

It will make that, or any Ford get right out and travel and keep traveling—not just for a little while, but for the life of the car, and the only way to make it balk again is to run out of gas—and that's your fault.

Another thing to remember—when you put a DALECO on a Ford it is there to stay, not for six months or a year but as long as there is a motor attached to it. And one DALECO to a motor is enough. You will have no need for a spare or to carry extra parts, and further the DALECO requires no lubrication.

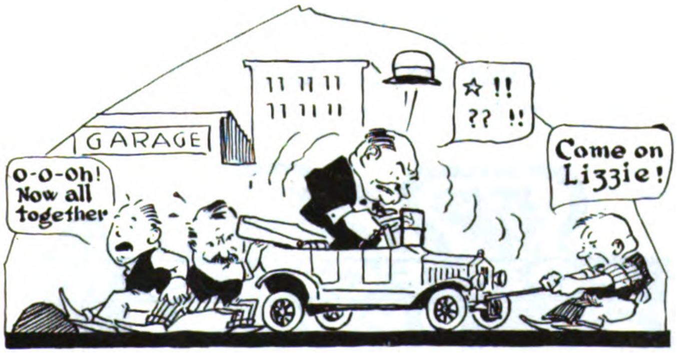
We back the statement and the DALECO TIMER with the most complete and comprehensive guarantee ever put on a timer and maintained by the maker, a guarantee we can afford to make because nothing depends upon you.

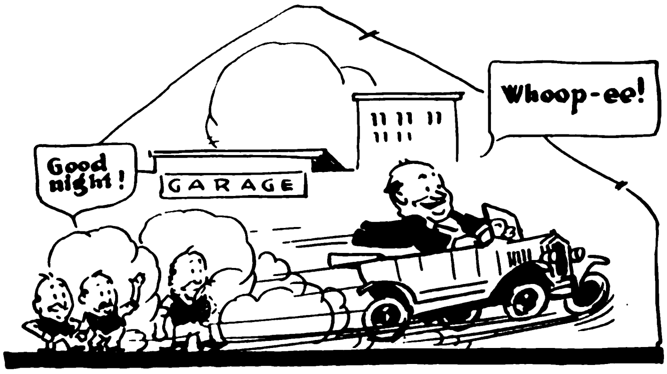
Other timers require lubrication and attention, the DALECO does not, just install it right and leave it alone.

Dealers, if you do not already handle the DALECO, write our sales department today for full details.

Manufacturers
DALE MANUFACTURING CO.
1323 Michigan Ave.
Chicago, Ill.

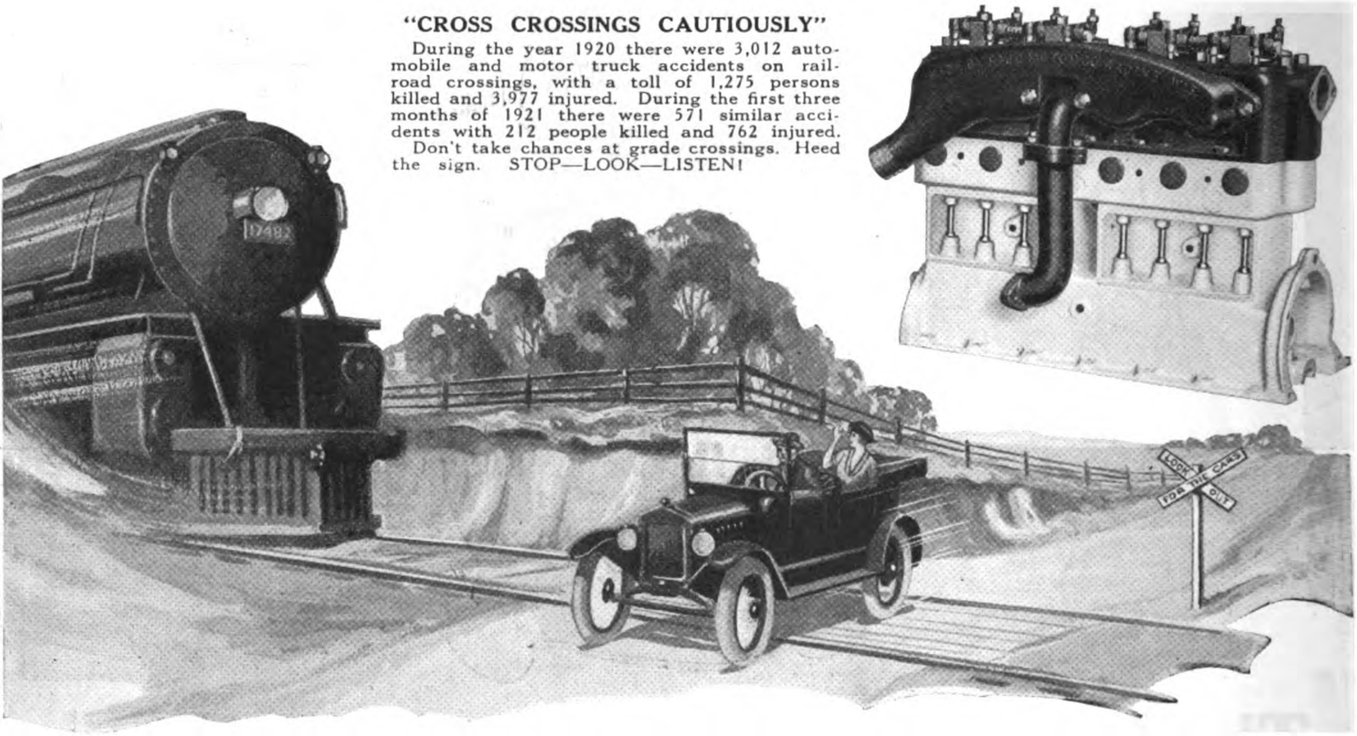
Sales Department
THE ZINKE COMPANY
1327 Michigan Ave.
Chicago, Illinois




Good night!
GARAGE
Whoop-ee!

"CROSS CROSSINGS CAUTIOUSLY"

During the year 1920 there were 3,012 automobile and motor truck accidents on railroad crossings, with a toll of 1,275 persons killed and 3,977 injured. During the first three months of 1921 there were 571 similar accidents with 212 people killed and 762 injured. Don't take chances at grade crossings. Heed the sign. STOP—LOOK—LISTEN!


LOOK OUT FOR THE CARS

When Safety Depends On Snappy Pick-Up!

An unexpected railroad crossing hidden by trees, a bend in the road, or a high bank. You slow down as quickly as possible to ease the jar of bumping over the tracks—and just as you run onto the crossing you discover a train bearing down on you at 60 miles an hour—almost on top of you. If you open your throttle wide you may stall your engine. If you don't, you are lost—unless your Ford has the responsive, flexible acceleration that only a RAJO Valve-in-Head can give.

From 5 to 40 miles in 14 seconds flat!—that is the snappy pick-up developed by the famous RAJO Valve-in-Head. It may spell the difference between disaster and safety for you many times, in different ways. Your insurance will not save you from accident. A RAJO Valve-in-Head **may.**

This specially designed head adds from 8 to 14 H. P. to the capacity of a Ford engine, gives a mileage of better than 25 miles to a gallon of gasoline, and makes possible speeds of from 5 to 55 miles an hour in high gear without changing the gear ratio. And it can be easily attached to any Ford car.

Order your Rajo Valve-in-Head today. Sold at all Western Auto Supply Company's Stores

WESTERN AUTO SUPPLY CO., Los Angeles, Cal.
Distributors West of Denver

RAJO OIL GAUGE FOR FORDS

(Also adapted to the NASH and BUICK)

A well oiled engine is another essential to snappy pick-up in emergencies. Keep your crank case well filled with good oil both as a safety precaution and a motor protection. A Rajo Oil Gauge will tell you instantly, at all times, just how much oil you have in your crank case. Just lift the hood and read the re-tipped wire. Easily installed, nothing to get out of order.

Price: $3.00

OTHER RAJO ACCESSORIES

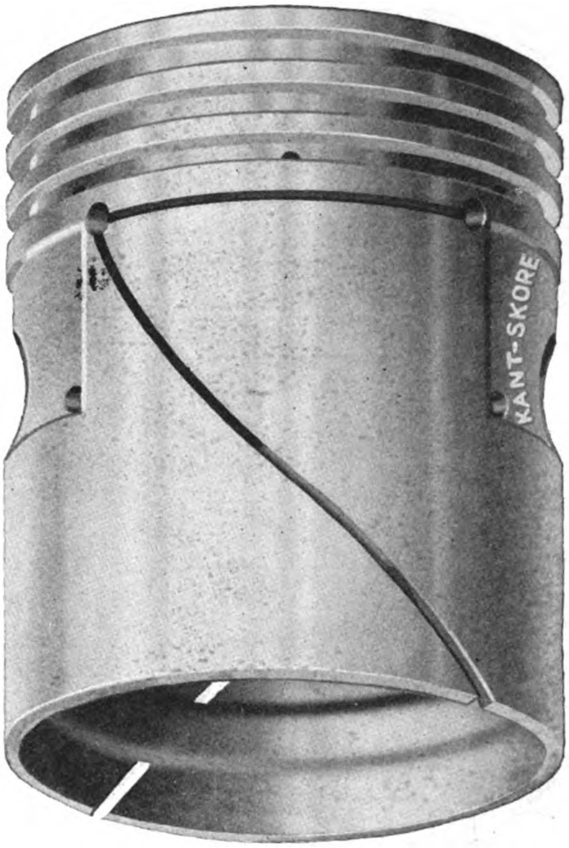
Rajo Valve Inspection Doors. Save oil; keep engine clean. $1.00 per pair.

Rajo Funnel-Fill Oil Cap for quick easy filling of crank case. Price: $1.25.

Rajo Magneto Plug Container for quick cleaning and replacement of magneto plug. Price: $1.00.

Manufactured by
RAJO MOTOR COMPANY
1361 Racine St., Racine, Wis.

RAJO
ACCESSORIES FOR FORDS



Kant-Skore Piston Advantages.

1—Weigh Lightest; Kant-Skore Metal weighs about ⅓ as much as cast iron.

2—Fit Tightest: Installed at the closest known fit. Clearance maintained constant at all speeds by Patented Spiral Slot.

3—Strong; strength not sacrificed to secure light weight—amply proportioned throughout.

4—Cooler Motor at all speeds. Kant-Skore Alloy radiates heat five times faster than cast-iron.

5—Less wear and tear on bearings.

6—Precision in manufacture. Cast in permanent molds, ground to precision.

7—Smoothness and silent flexibility of power.

8—Replaces cast-iron pistons with gain of great many advantages.

9—Increases speed and power.

10—Increased mileage per gallon of gas; reduced oil consumption.

How are you going after the Piston Replacement Business?

Are you installing heavy cast-iron pistons, or ordinary aluminum pistons? Install Kant-Skore light-weight close-fitting pistons and build up a profitable piston replacement business.

Kant-Skore Pistons are about one-third the weight of cast-iron pistons. This lightness is not gained by sacrificing strength; the piston is amply proportioned and of uniform wall thickness throughout. It will not warp or distort from varying temperatures. Kant-Skore Metal is scientifically alloyed for strength, hardness and wearing qualities. The motor runs cooler, for Kant-Skore Metal radiates heat five times faster than cast-iron.

Kant-Skore Pistons are installed at the closest known clearance. Expansion of the metal when the motor heats up is taken care of by the Patented Spiral Slot—an exclusive Kant-Skore feature. And this clearance is maintained constant throughout speed range of the car—from a crawl to the maximum. The advantage of this is apparent when it is known that oil pumping, plug fouling, piston slaps, etc., are caused by loose fitting pistons.

Install Kant-Skore Pistons, Give the car owner a new car, with more power, more pep and a silent flexibility of power that will respond to every touch of the throttle. Power that may be throttled down to a crawl in heavy traffic, and quick on the get-away when the way is clear. Kant-Skore Pistons increase the miles per gallon of gasoline, and reduce oil consumption.

When the car owner drives his car in for overhauling, tell him about Kant-Skore Pistons. He will appreciate the savings in gas and oil, increased power, more pep. Furthermore, you give him a car as good as new, without the "trade-in" loss. Send for price list and liberal proposition. Install a trial set—every set you install works for you, building up a substantial and profitable piston replacement business. Send for price list today and begin to get your share of the profits.

THE KANT-SKORE PISTON CO., CINCINNATI, OHIO.
Factory Branch: 1514 McGee St., Kansas City, Mo.

Kant-Skore
PISTONS

WEIGH LIGHTEST · FIT TIGHTEST

REGRINDERS—REPAIRMEN—DEALERS

THE
KANT-SKORE
PISTON CO.
Spring Grove Ave.
CINCINNATI, Ohio

Please send me price list of pistons for Cars, Trucks, Tractors and Motorcycles. I am a
☐ Dealer ☐ Repairman
☐ Regrinder

Name..

Street No..

City..State..........

MW.8-15-22

One quality—two designs

There is a battery built by Westinghouse for every car and purse. And you may be sure it is a good battery, or it would not bear the name Westinghouse.

WESTINGHOUSE STANDARD. The best battery Westinghouse can build! Oversize plate area—as much as 25 per cent; and warranted under a guarantee new in features and unequaled in liberality.

WESTINGHOUSE "WUBCO" SPECIAL. For lighter weight cars. The best battery a man can buy for the money! Normal capacity. Rubber case. Quality construction. Lower priced.

Westinghouse battery service stations and dealers have always had the undoubted sales-making advantages acquired from association with the name Westinghouse. Now, in the "Wubco" Special they also have a low-priced, quality-constructed, WESTINGHOUSE-BUILT battery with which to secure the patronage of the large percentage of "price" buyers. We invite inquiries from good battery men.

WESTINGHOUSE UNION BATTERY CO., Swissvale, Pa.

WESTINGHOUSE

BATTERIES

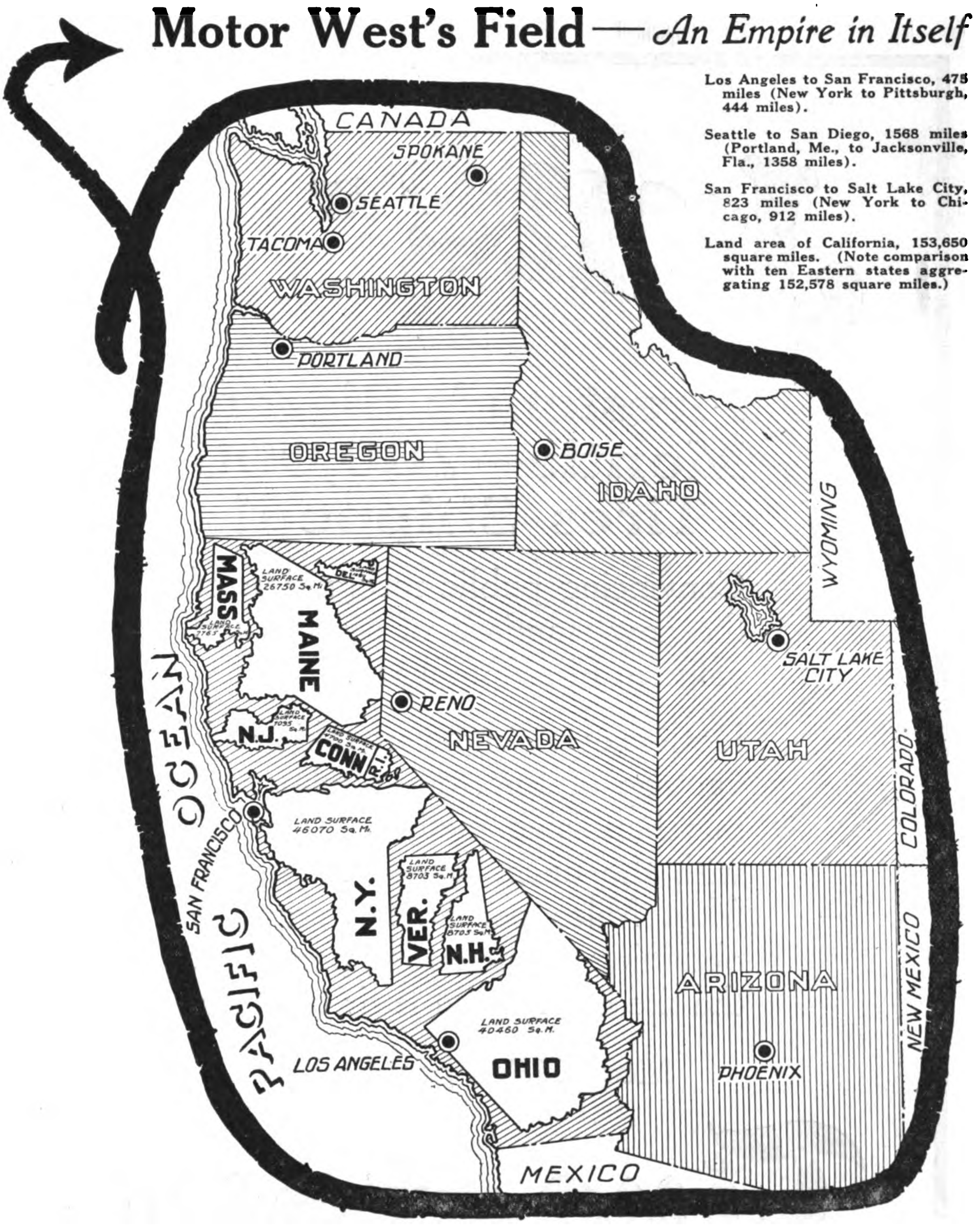
Motor West's Field—*An Empire in Itself*

Los Angeles to San Francisco, 475 miles (New York to Pittsburgh, 444 miles).

Seattle to San Diego, 1568 miles (Portland, Me., to Jacksonville, Fla., 1358 miles).

San Francisco to Salt Lake City, 823 miles (New York to Chicago, 912 miles).

Land area of California, 153,650 square miles. (Note comparison with ten Eastern states aggregating 152,578 square miles.)


CANADA
SPOKANE
SEATTLE
TACOMA
WASHINGTON
PORTLAND
OREGON
BOISE
IDAHO
WYOMING
MASS
LAND SURFACE 7765 Sq. M.
LAND SURFACE 26750 Sq. Mi.
DEL.
MAINE
RENO
NEVADA
SALT LAKE CITY
UTAH
LAND SURFACE 7095 Sq. M.
N.J.
LAND SURFACE 4700 Sq. M.
CONN
R.I.
1068
COLORADO
OCEAN
SAN FRANCISCO
LAND SURFACE 46070 Sq. Mi.
N.Y.
LAND SURFACE 8703 Sq. M.
VER.
LAND SURFACE 8703 Sq. M.
N.H.
PACIFIC
ARIZONA
NEW MEXICO
LAND SURFACE 40460 Sq. M.
LOS ANGELES
OHIO
PHOENIX
MEXICO

Motor West's field takes one-sixth of the product ot the automobile and accessory factories of the United States. On the other hand it produces the great bulk of some of the foods and other commodities consumed by the rest of the country. In industrial production, note its ten-year increase in number of factories—86 per cent; in factory hands—97 per cent; in annual factory production—187 per cent. What Eastern plants do not adequately supply it, it soon will supply itself. Its raw materials, such as cotton, hides, etc., are as near to its manufacturing centers as those in the East are to factories there. Climate favors it, too—the Mare Island navy yard near San Francisco produces 25 per cent more than other navy yards, for the same labor cost. Living conditions are ideal, unemployment less, slums unknown, power is plentiful. The water power resources of 11 Far Western states total 42,850,000 horsepower; of the rest of the country, only 20,640,000. The installed capacity of these 11 Far Western states has only begun—in 1920 it was only 2,515,000 horsepower, of which California supplied 1,228,000; the Pacific Northwest 585,000; Intermountain and Southwest states 702,000; but by 1930 the total installed capacity of the region will be 5,352,000 horsepower. California's plans alone, for the decade, call for expending $500,000,000. To see the region's possibilities, consider that even 100,000 horsepower will run 1300 factories producing $140,000,000 in goods annually, and will serve also for very much more than that in irrigation, transportation and lighting.

June—

Firestone's Biggest Month—700,000 Tires Shipped!

Convincing public recognition of the new standard of service and value in Firestone Tires.

Dealers everywhere are taking advantage of Firestone quality and merchandising methods, together with the unchallenged record of Most Miles per Dollar, and are obtaining an increasing portion of the tire business in their territory.

Most Miles per Dollar

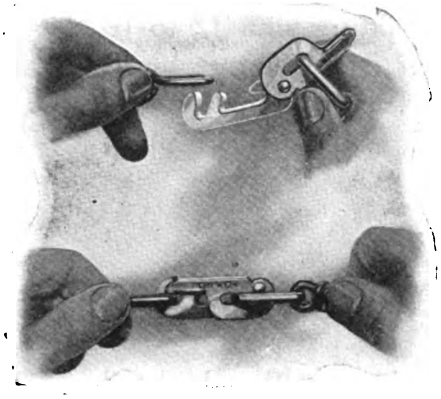
Firestone

GUM-DIPPED CORDS

Modern Chains Like These Cost No More— They Sell Faster

The wide-awake merchant always looks for the best. That's why he quickly sees the big advantages in

OFF'N'ON CHAINS

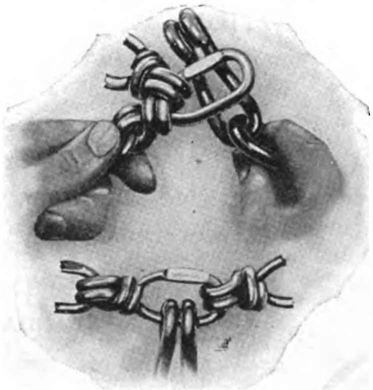


The Positive Lock

This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No more lost chains—no more loose chains.

The Slip-on Link

This patented slip-on link makes it easy to take off the old cross chain and put on a new one. A child can do it.



1—You can put them on and take them off in less time than other chains.

2—You can quickly and easily take off and put on a new cross chain anywhere, anytime.

Order today from your jobber. Buy spare cross chains, for you can sell a set of extra cross links with every chain.

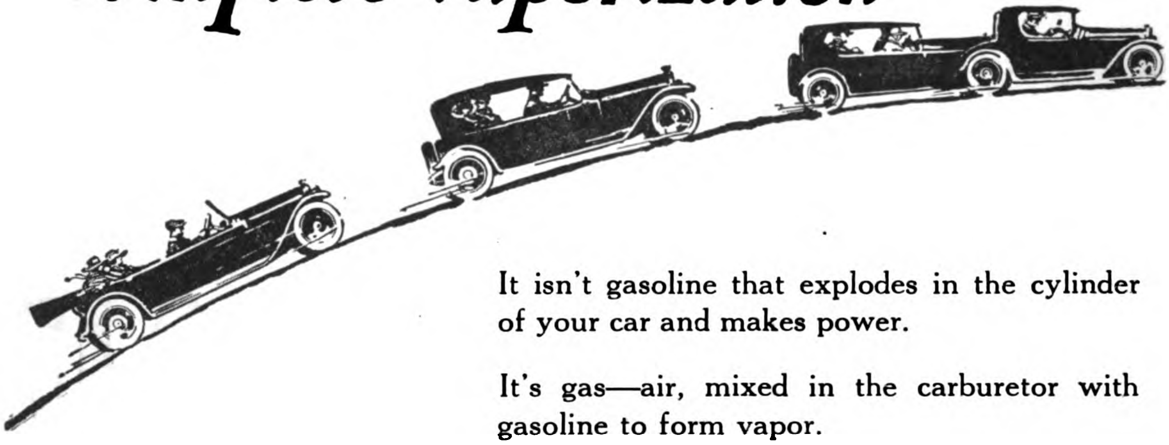
Write us for circular and price list, giving the name of your jobber

PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers 520 Belmont Ave., Newark, N. J.

Branches: CHICAGO—17 So. Jefferson Street KANSAS CITY—1712 Grand Avenue
ATLANTA—24 Nassau Street SAN FRANCISCO—977 Mission Street

More mileage—the result of *complete vaporization*



It isn't gasoline that explodes in the cylinder of your car and makes power.

It's gas—air, mixed in the carburetor with gasoline to form vapor.

Red Crown gasoline *vaporizes completely*. It forms a homogeneous mixture with 12 to 16 times its volume of air. That mixture burns cleanly and powerfully, leaving comparatively little carbon residue on valves, spark plugs and cylinder walls.

That's why you get better mileage out of "Red Crown"—and a cleaner, sweeter-running engine.

Fill at the Red Crown sign—at Standard Oil Service Stations, at garages and at other dealers.

100% power
©1922

RED CROWN GASOLINE

STANDARD OIL COMPANY
(CALIFORNIA)

The Gasoline of Quality

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 9 AUGUST 15, 1922 $3.00 PER YEAR

SALES IN ARIZONA BREAKING RECORDS

One Distributor's July Business 1000 Per Cent Better Than Same Month Last Year—Other Examples.

June and July, also August up to a recent date, have been record business months for the automobile and accessory trade in Phoenix, and satisfactory sales conditions seem to have returned throughout Arizona, after an absence of nearly two years.

M. P. Barret, Inc., Studebaker distributor, did a July business 1000 per cent greater than that of July, 1921.

Overland-Arizona Co., in the first six months of 1922, sold more Overland and Willys-Knights cars than in all of the previous year.

R. D. Roper, Maxwell and Chalmers distributor, sold 62 cars in January, 41 in February, 82 in March, 95 in April, 167 in May, 136 in June, and 210 in July.

P. A. Quinlan, of Babbitt-Cadillac Co., says his one worry now is to get enough Buick and Cadillac cars to fill orders.

Electric Equipment Co., distributing automotive electric equipment in Arizona, has shown a 25 per cent increase in business in each of the four past months.

Kelly-Springfield Tire Co., Phoenix branch, recently had the best single sales day in its history. July was its best business month, and it now is handling a business three times that of last year.

R. E. Nicolai, manager of the Phoenix branch of Goodyear, reports that in July the branch exceeded the factory quota for the first time in many months. He was appointed branch manager recently, succeeding W. E. Anderson, who now is in charge for Goodyear at Medford, Ore. The Phoenix branch takes over the Salt River Valley region, formerly handled from El Paso, in addition to Gila River Valley.

The Columbia agency for Arizona has been taken by Overland Arizona Co., Fourth Ave. and Washington St. It continues the Overland and Willys-Knight agencies.

Associated Oil Co., the large California oil refining company which formerly restricted operations to Northern California and the Northwest, enters Arizona with the appointment of Gillespie Petroleum Products Co., Phoenix, to handle Cycol motor oils through its chain of service stations.

Railroad Strike Is Felt.

When trains to the Coast, bearing passengers, freight, advertising copy and so on, were delayed as in the past few days, and trains which left Coast points got only far enough to enable folks on them to know what it is to be stalled in desert heat,—then it became clear how important transportation is, these times. Great loss is reported. Commerce is suffering, and motor transportation is preventing its suffering more than it is.

Trestle Plan for Desert.

Sand dunes are not loved by those who motor between Yuma and Imperial Valley. Calexico is considering a plan—a 16 foot trestle to span the four miles of shifting stuff that make paving out of the question.

Gasoline Dealers Must Live.

Stating that gasoline retailers in Los Angeles had not been making a decent profit, an oil company official announced, August 11, a cut of 1 cent, to 20 cents, to dealers. Retail price remains at 23.

Utah Sales Hurt By Strike.

If Utah registration statistics do not show up as well as desired, the fact no doubt is temporary. The railway strike is blamed and a good fall business is expected.

HALF-YEAR RECORD IN PACIFIC REGION

Cars and Trucks Exceed Those in Same Period Last Year by 188,484 Despite "Hard Times" Hangover.

Passenger car and motor truck registrations are an unfailing index of general business conditions, and especially in automotive lines.

A comparison of total registrations in the seven states comprising Motor West territory, for the first half of the present year, with those for the first half of 1921, shows a marked improvement, despite the fact that the first two months of 1922 were included in the slump period which extended through last winter.

The figures, which come from the secretary of state's office in each state, follow:

	Registrations	
State	June 30, 1921	June 30, 1922
Arizona	32,160	32,847
California	588,863	722,853
Idaho	46,000	47,094
Nevada	9,688	10,876
Oregon	84,311	109,001
Utah	41,136	40,700
Washington	176,206	203,477
Total	978,364	1,166,848

This shows a gain of 188,484 in registrations of passenger cars and trucks for the first half of this year, over the corresponding period of 1921.

With the increasing prosperity of farmers, based on excellent crops and improved prices, the second half of this year, it is predicted, will show an even more marked gain compared with the same period in 1921.

They Shut Up for the Day.

As to talking business, in fact as to have their places open, August 14, the dealers of Long Beach, Calif., shut up. They expected to start at 9 a. m., 600 strong, for the Automobile Trade Association picnic in Pasadena; for surcease from sorrow.

GROUND IS BROKEN FOR DOBLE PLANT

First Unit of Steam Car Factory at Atascadero Expected to Be Ready In Four Months from August 12.

Ground-breaking ceremonies, August 12, marked the start of work on the first unit of the factory at Atascadero, San Luis Obispo County, Calif., to be built by Doble Steam Motors Corp. for the manufacture of Doble steam cars. It is to be ready for operation within four months, and will be of reinforced concrete, with steel-framed glass windows which will make up 90 per cent of the total wall area. The company, capitalized at $10,000,000, has as directors Abner Doble, designer of the Doble steam car, and the company's president; W. A. Doble, Jr., and Warren Doble, who control Doble Laboratories, San Francisco; Harold Haven, and E. G. Lewis, of Atascadero and Palos Verdes development fame.

The Doble car has but 36 moving parts, no pilot light, gears, clutch, drive shaft, oil pump or valves. No carbon trouble is possible, it is claimed, and merely turning a lever starts the car, which burns gasoline, kerosene or distillate, without any change of adjustment.

Star Motor Co. Office Building.

Plans have been approved by the officers of Star Motor Co. of California for the erection of a modern office building on East Fourteenth St., Oakland, adjoining the new million dollar Durant Motor Co. factory. Construction will start at once, and the specifications call for a completion in 90 days. The architecture will be similar to that of the Durant plant, the main office building being 150x80 feet, of brick and concrete.

Aside from the office building, two immense warehouses will be erected in rear of the 5 acre tract, that will take care of all cars awaiting shipment. These warehouses will be 200x100 feet and, like the mammoth Durant warehouses, be of brick.

Star Motor Co. of California was organized a few months ago. Norman De Vaux is president; R. C. Durant, vice president; R. H. Mulch, sales manager; W. B. Starz, comptroller.

Mr. Mulch states that the first Star car to arrive on the Coast will be received about August 15 and will be used as a sample until Star production starts at the Durant factory.

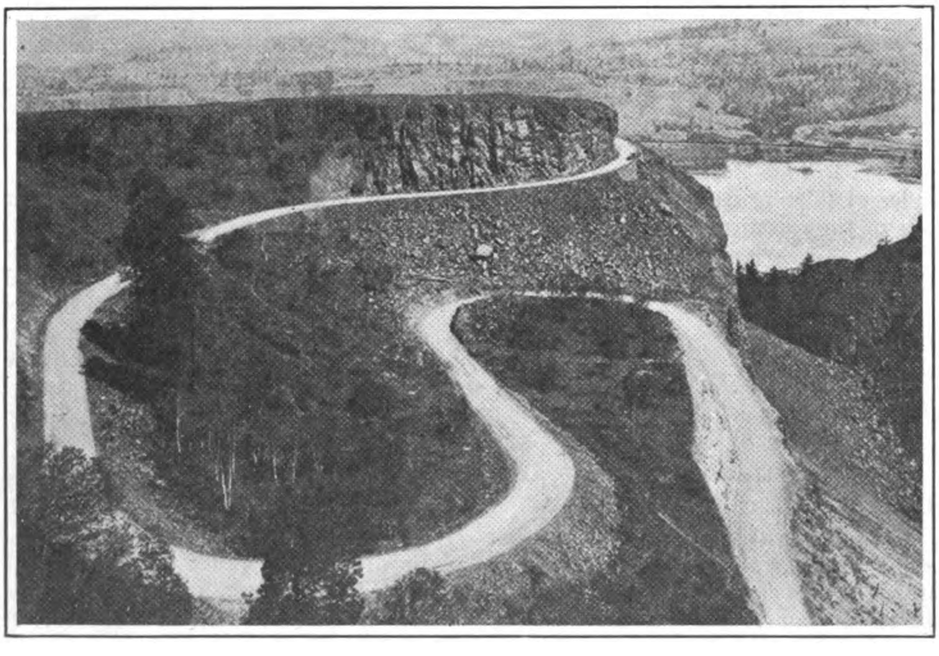
"No Star contracts have been allotted yet," says Mr. Mulch, "on account of actual production not starting until September. There have been multitudes of applications from all parts of the West for territory, and these will receive due attention about September 1."

Now Gruss Air Spring Co.

What was Pneumatic Cushion Co., at Grove St. and Van Ness Ave., San Francisco, has changed its name to Gruss Air Spring Co., to better fit its product, the famous Gruss air spring.

Sacramento Suburbanites Need 'Em.

More than 1000 suburban homes near Sacramento are dependent chiefly on the motor car for transportation, according to the real estate board of that city.



ROWENA-THE DALLES LOOP, BETWEEN MOSIER AND THE DALLES, OREGON.

NEW MILLER MOTOR SMALL BUT OH MY!

Engine About Ready to Be Built Means a One-Man Car, Expected to Navigate at About 125 Per.

Not behind—quite possibly in the lead of Packard, Duesenberg or other 122 cubic inch motors said to be in the making for racing and, consequently, for general use—is the outlook as to a new motor designed by Harry Miller, of Los Angeles.

It is of the eight-in-a-row type of Miller motor which Murphy, Milton, Elliott and other speed merchants find profitable.

Two of the new motors are to be built soon. Bore and stroke are expected to be 2 11$^{11}/_{32}$x3½. It means a narrow frame—22 inches at the widest part, with 27 inch body to accommodate the pilot, who will not have a mechanic. Wheelbase, same as now, 104 inches. Weight, about 1400 pounds. Motor horsepower, 90 to 95.

Owing to light weight, the new car is expected to be as fast as those which have the present Miller motor. Murphy drove one of the latter at unofficial world record speed at Cotati recently—124.31 miles per hour.

The new cars will be built entirely in the Los Angeles factory, except as to wheels, tires and ignition units. The Delco system will be used.

Club Third in Insurance Rank.

At the end of last year, Automobile Club of Southern California was the third largest insurance-writing organization in the country. In 1920 its premium income was $2,442,974, and last year, $3,181,070. It expects a minimum of $4,000,000 as net premium income for 1922, which should advance it from third to second position, not at the expense of a higher loss ratio but more-conservative-than-ever underwriting methods on the automobiles of its members. For 1921 business it was surpassed only by such ancient insurance concerns as the Home, of New York, and Firemen's Fund.

Missing-Link Celebration.

Time, August 15. Place, Buelton, little town in Santa Barbara County, Calif. Occasion, celebration of complete paving of a 14 mile blot, miscalled a highway, between Las Cruces and Zaca Station, on the coast route, traveled by hundreds of motorists daily. A large swarm of motorists, even from far places, it was announced, were expected at the heartfelt celebration.

ELLIOTT BREAKS WORLD'S RECORD

Puts 50 Mile Figure at 116.15 Per, in Half-Century Race at Cotati, Taking the 100 Mile Event Also.

Cotati is becoming better known than as merely being halfway between Santa Rosa and Petaluma.

The nonstop way Frank Elliott and his Leach special, with the motor Miller makes in Los Angeles, won both the 50 and 100 mile races in its 1¼-mile-around wooden bowl, August 6, against quite distinguished competitors, incidentally breaking world's record in the 50, tickled Cotati, and the 15,000 crowd, and that whole section of northern counties, plumb to pieces.

Elliott's 50 mile time was 25:49.72, averaging 116.15 miles per hour. Former record, 115.2 per hour, was by Milton, Durant special, Los Angeles, April 2, 1921. In that race Milton's followers at the finish were Murphy, Hartz, Bordino, Sarles, Elliott, Klein, in the order named.

Elliott took the 100 miler at Cotati in 53 minutes flat, averaging 113.21.

The order of finish in the races was as follows:

50 MILE EVENT.

Driver.	Car.	Prize.
Frank Elliott	Leach	$1600
Tommy Milton	Leach	700
Eddie Hearne	Dist.-Duesenberg	400
Jerry Wanderlich	Duesenberg	350
Bennett Hill	Miller	300
Art Klein	Frontenac	275
Al Melcher	Duesenberg	250
Harry Hartz	Duesenberg	225

100 MILE EVENT.

Driver.	Car.	Prize.
Frank Elliott	Leach	$3600
Tommy Milton	Leach	1400
Jimmie Murphy	Murphy	800
Bennett Hill	Miller	650
Art Klein	Frontenac	500
Eddie Hearn	Dist.-Duesenberg	450

There were 10 entrants for the day. The pilots, their sidekicks and cars, were:

Elliott—McKee	Leach special
Hartz—Terry	Duesenberg
Hearne—Cunningham	Dist.-Duesenb'g
Hill—Cairns	Miller special
Klein—Steihl	Frontenac
Melcher—Haskell	Duesenberg
Milton—Wilson	Leach special
Murphy—Olson	Murphy special
Sarles—Ansterburg	Durant special
Wanderlich—Curley	Duesenberg

In the 50 mile race, Murphy took a quarter mile lead and it seemed his sixth consecutive win, but in the 17th lap rubber from a stripped tire wound around the disc of his rear right wheel, and he lost so much time at the pit he withdrew. Elliott took the lead and kept it.

The first 30 miles, the pace averaged 119 per hour. Sarles had valve trouble and quit after 4 laps.

Wanderlich was a surprise, after his poor tryouts the week before. In the race he did not stop and finished fourth.

Milton changed a tire in the 10th lap but nearly won, at that.

As to the others—harassing detail. Generally speaking, too much speed, or something, for the tires.

In the 100 mile event, Milton took the lead but quickly was led by Eddie Hearne. After the second lap Bennie Hill took the lead, and at 10th lap the order was Hill, Hartz, Hearne, Elliott, Murphy, Milton, Wanderlich, Klein, Melcher. Then Hartz went up. In the 16th lap, Klein to pit, tires. At different points Hartz and Hill took the lead from each other. The speed increased constantly from 112 at 15 laps to 113 at 47. Stops for tires, more than enough—four cars did it at one time, together.

Elliott took the lead in the 43d. He gained steadily then. At 50 laps the order was Elliott, Hill, Hartz, Murphy, Milton, Hearne, Klein, on the score board. Hearne then was at his pit. Wanderlich had quit.

And so on, Elliott leading to the end.

The 50 mile event for Fords was funny, though it seemed slow. Mathews drove the Hughson special to victory in 43:11.40, averaging 78 per. Starting the cars was a job. Fred Wagner could not get them to bunch and stopped them after they had rambled chaotically 3 laps, and in the restart the Smith special lost a front wheel which went by leaps and bounds, 100 yards.

Joe Thomas did not compete. July 29 two of his Duesenberg's wheels collapsed while in practice at 118 per. Al. Nielsen and Johnny Bresnahan, mechanicians, were in the car, with Nielsen driving. They were thrown far and went to hospital. The car was damaged badly.

Murphy was announced as second in the 100 mile. Associated Press sent this "news" over the country. A recheck showed Milton was second.

The merit of the winner's motor goes without saying; but the track is fast. On May 30, at Indianapolis, practically all the professional stars, and Cliff Durant, signed a letter at Jack Prince's request, saying they considered Cotati track "the best one both for safety and speed."

When Murphy's special with Miller eight-in-a-row, 183 cubic inch motor with 8 carburetors did a lap at Cotati, August 1, at 121.62 miles per hour, it was stated to be the fastest since a 905 cubic inch, 12-lunged Packard is said to have done a lap or so at 128 per, on the former 2 mile track at Sheepshead Bay, New York, in 1917. On August 3 Murphy was clocked at 124.30 miles per. Unofficial. Never official except when arranged for and electrically timed. No doubt correct, however.

Saturday evening, August 5, the speedway directors gave the drivers, mechanics and officials a dinner in Santa Rosa. An incident was passing the hat for Al. Nielsen, Joe Thomas' mechanician, who was hurt while driving, in practice. The sum raised was $130.30.

A. M. Young, manager of the Los Angeles track, was there.

Dr. Rastall, San Francisco, head of the Northern California boosting movement, is said to have declared Cotati speedway the greatest single advertising feature in its part of the state.

There were s-o-m-e stops for tires.

Milton 1, Murphy 2, was the "expert" dope. Elliott, or Miller, or somebody or something, not forgetting tires, spilled the dope.

The Warner electrical timing system was used.

Do relatively short races please the peepul? Askum. In fact they said so at Cotati.

Assuming that the announced times were right, the averages — reported widely—were wrong. Too fast.

Tommy Milton, Leach special, did a lap (1¼ miles) in :26.40 on the Los Angeles track early this week. That was 123.62 miles an hour, and fastest time ever made on the track. Murphy, also with a Miller motor, did a lap at better than 120 per before he went East last summer.

The motors Miller makes in Los Angeles have won practically all this year's big races—Indianapolis, Uniontown, Tacoma, Cotati, San Carlos, Los Angeles.. Murphy won the Fresno race early in May with a Duesenberg.

It seems to be so, that Harry Miller is building, completely, in Los Angeles, some racing cars for a team to be used by R. C. Durant next season. Miller motor, of course.

THE WINNERS IN THE SAN DIEGO-EL CENTRO ECONOMY RUN.

Class	Car and Driver	Gasoline Gals.	M.P.G.	Oil Pts.	Water Pts.	Ton-mile Record	Sweepstakes Record
E	Ford—R. W. Rackett	8.5	28.94	1½	16	29.404	19.246
F	Oakland—H. Neville	6.09	40.39	None	½	59.379	58.969
G	Rickenbacker—R. M. Coxall	7.01	35.08	1	7	54.744	48.325
H	Holmes—M. S. Smith	9.0	27.33	3	None	49.815	46.481

The other contestants were: Wills St. Claire, driven by R. C. Shannon; National, E. O. Dorris; Lexington, L. A. Chase; Ford, W. W. Tancre; Maxwell, Fred Maddox; Buick, A. C. Hansen; Chalmers, H. O. Stock; Durant, M. L. Dearborn; Essex, F. A. Heldenbund; Stephens, C. McMartin; Hupmobile, W. B. Connery; Reo, Clay Moore; Durant, H. O. Neloby; Nash, S. W. Johnson; Oldsmobile, H. H. Brown. The nast-named car made a strong bid for sweepstakes honors, with a score of 56.037, but was beaten out by the Oakland.

OAKLAND WINS IN SAN DIEGO TUSSLE

Economy Run to El Centro and Return Goes to Car and Driver that Took the Los Angeles-Yosemite.

Repeating its victory of last May, in the Los Angeles-Yosemite economy run, the Oakland, driven by H. Neville, annexed class and sweepstakes honors in the 246 mile economy run from San Diego to El Centro and return, August 8, with a ton-mile record of 59.379 and a sweepstakes score of 58.969. Neville also had driven the Oakland to its Yosemite victory, with ton-mile figures of 49.37 and a sweepstakes score of 49.20.

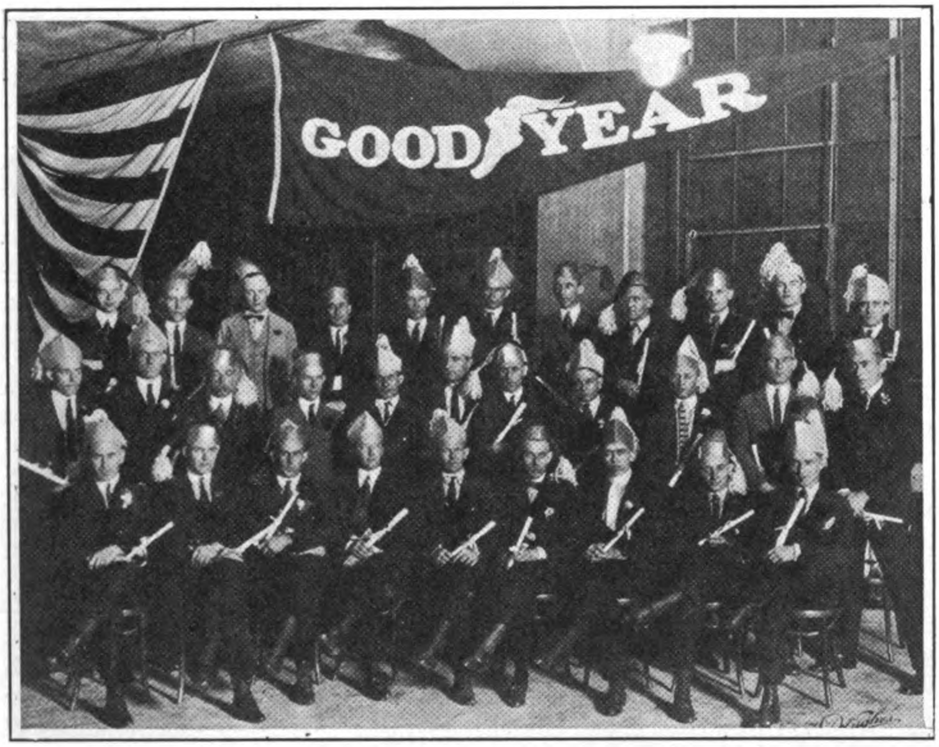
The winners in the other classes in the San Diego-El Centro run were: Ford, driven by R. W. Rackett, with ton-mile record of 29.404; Rickenbacker, driven by R. M. Coxall, 54.744; and Holmes, driven by M. S. Smith, 49.815.

The Oakland's total gasoline consumption was but 6.09 gallons for the round trip, giving a record of 40.39 miles per gallon. No lubricant was taken on during the round trip, and but a half-pint of water.

The performance of the Rickenbacker, driven by R. M. Coxall, was also worthy of note, the round trip being negotiated with but 7.01 gallons of gasoline, giving a record of 35.08 miles per gallon. Seven pints of water and 1 pint of lubricant were taken on during the contest.

The route was through East San Diego, La Mesa, El Cajon, Viejas, Buckman's, Jacumba and Mountain Springs to El Centro, returning by the same route. The pacemaking and official car was a Lincoln.

Not an accident marred the contest, and every car returned to the starting point within the time limit, 12 hours. A Reo Speed Wagon, furnished by Ralph Hamlin Co., serviced the run, and covered the entire distance well within the time limit.



GRADUATE MASTER RUBBER WORKERS OF THE GOODYEAR FLYING SQUADRON. Graduation time! Even in a rubber factory! At the Goodyear plant in Los Angeles, the evening of July 31, Harry Blythe, factory superintendent, handed diplomas to 31 members of the Goodyear Flying Squadron as master rubber workers. The Flying Squadron idea was originated by Paul W. Litchfield, factory superintendent at Akron, in 1913. The idea is to train men as experts, to be always ready to fill any vacancies. It is a strenuous course of training for picked men. It covers three years, and every tire manufacture operation. When the Los Angeles plant was complete, 106 Flying Squadron men came from Akron to start operations and act as instructors. The 31 men who graduated July 31 were the last of those 106 to complete the course. Suprintendent Blythe paid them high tribute as he passed them their diplomas at the banquet, at which C. F. Langdon of the technical service department, presided. A new squadron is being selected from workers in the plant.

New Laws in Arizona.

Arizona's new highway and vehicle law is now being enforced in many sections of the state. A notable feature is requirement of a strong white light on the left side of all vehicles other than motor-driven. Among special limitations are a maximum vehicle width of 108 inches; coupled length, 85 feet; weight, 28,000 pounds; 35 miles an hour in open country, 20 miles in suburbs, 15 miles in cities, but 10 miles everywhere for solid tired vehicles. "Vigilantes" will be sent out by the Automobile Club of Arizona to report violations.

Fuel Costs Are 10 Per Cent.

The question of what part of every dollar of motoring costs is spent for gasoline is answered by some interesting statistics published by Standard Oil Co. of California. Conclusions are based on the average performance, over a wide territory, of cars found in the price range of Buick, Dodge and Ford. The figures show 10.26 per cent goes for gasoline, 1.12 for oil and grease, 10.42 for tires, 20.65 for miscellaneous expenses, 15.38 for depreciation, and 42.17 for repairs.

Want Shingled Roof? Read On.

A bill with a joker making it illegal to wood-shingle even a shack, in California incorporated towns, cities, or cities and counties, slipped through and was signed. It is the housing act, Senate bill 288, introduced in the last legislature by Senator Burnett of San Francisco. The state's housing commission repudiates it and its chairman has written the reasons to be used against it, and 53,000 voters have signed the petition that will put it before the people in November.

Cutout Cough Cuts Road Surface.

A bas the cutout, in cities; but in the country it still coughs unrebuked, especially by those to "like the noise"—whose prehistoric forbears, perhaps, were tom-tom and war-whoop jazz champions.

It's an expensive kind of cough for the public, though. Oregon's state highway engineer says it blows the surface off the roads. He declares open cutouts did $20,000 damage in a recent two weeks, between Sheridan and Hebe.

Swear by your rights? Sure; but wait till the coast is clear.

AT DEDICATION OF THE LEHMAN CAVES

Impressive Ceremony On Slope of Huge Mount Wheeler in Eastern Nevada, and Some Alpine Thrills.

Recently Motor West printed a map showing how, from near Provo, Utah, a motorist from the East may go west on what is known locally as Grand Central Highway, to Ely, Nev., on Lincoln Highway; thence west to Reno direct or southwest on Roosevelt-Midland Trail (which also serves as the Lincoln Highway southern route) to Tonopah, thence northwest to Reno or on westward through Westgard Pass to Big Pine, Calif., junction for travel south, also north and over the Sierras to Sacramento.

For those motoring between Salt Lake City and the Coast the Provo-to-Ely way is longer, but quicker and far better, than across Great Salt Desert via either Lincoln or Victory Highway.

Lehman Caves, in the side of Mount Wheeler, near Baker, 65 miles southeast of Ely, Nev., are another reason for using this route. They far surpass Kentucky's Mammoth Cave in area and are dry, not "soppy". Marvelous in contour and coloring, they will be famous throughout the world; and their fame has been hastened by the initiative of C. C. Boak, mining engineer of Tonopah, who by his able presentation of their value caused Congress to set aside the spot—a considerable one—and name it Lehman Caves National Monument.

On August 6 this rare national possession was dedicated. The exercises were attended by 418 persons, many of whom went to that great mountain in Eastern Nevada in 94 motor cars; and 325 of them went into the caves. It was the largest crowd of white people, perhaps of any people, ever seen at the spot where Baker is.

Forest Supervisor Alexander McQueen opened the exercises, introducing Forester G. S. Quate, who recited the caves' early history, down to the time when Mr. Boak interested himself in their preservation for the nation.

C. W. Creel, chief of the extension service of the Farm Bureau, then read about a dozen congratulatory telegrams, addressed to Mr. Boak, among them wires from Senators Pittman and Oddie; Governor Boyle of Nevada; members of Nevada's supreme court; President Charles W. Davis of National Highway Association; Wisner Gillette Scott, California projector of highway plans of magnitude; and others. On his return to Tonopah Mr. Boak found messages from President Harding, also Secretaries Fall and Wallace, of the Department of the Interior and Department of Agriculture, respectively.

The dedicatory address, by Col. G. F. Scrugham, Nevada's state engineer and representative of Governor Boyle, was an orator's tribute to the motives that made the monument possible Then, in the name of the governor, he dedicated the caves to the people of the United States, forever.

Then the flag raising. Mr. Boak had presented a beautiful Old Glory, 6x12 feet in size. The mast was erected by the Forest Service. A squad of American Legion men, uniformed and armed, gave the flag military honors. As three color bearers carried it to Mr. Boak the others stood at present arms. As Mr. Boak slowly raised the flag the rich soprano voice of Mrs. Jurich, of Ely, sang The Star Spangled Banner. When the flag reached the masthead a salute of three volleys was fired. The ceremony was over. Then the caves were entered.

Next morning a party composed of Foresters McQueen, Quate and Townsend, and Mr. Boak and several plucky representatives of the fair sex, started with horses and pack animals for the summit of Mount Wheeler, 13,047 feet above sea level. Camp was made that night 2400 feet below the summit. At 3 o'clock next morning breakfast was served, the animals saddled and by sunrise the party was 12,000 feet up. From there on the climb was afoot.

At the top, after depositing certain records, Messrs. Boak and McQueen sallied forth to photograph the gorges formed when the peak was split, by earthquake or otherwise, ages ago. Imagine a narrow gorge with perpendicular walls 2500 feet deep. On this occasion the gigantic clefts were christened — The Castellated Gorges of Mount Wheeler.

Then followed a great experience. A glacier extends from the summit to the base. Descending it had been considered impossible, yet the whole party did it. There was real hazard. Missing a foothold meant being hurled down 2500 feet. Once started on the trip, none could turn back. Mr. Boak named the descent McQueen's Slide, but within 15 minutes this name had been transformed to My Queen's Slide, and fittingly—also plurally, as all the "queens" slid.

The party reached the bottom after many narrow escapes, exhausted, wet to the skin; but it had made history.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

Palm Canyon Bill Passed.

A bill to preserve 1600 acres, near Palm Springs and about 60 miles southeast of Riverside, Calif., as a national monument, passed the House in February and the Senate on July 12. The President then signed it.

The area, not usable agriculturally, is a small part of the land of the Agua Caliente Band of Indians, with whom a per capita payment is to be arranged; and they retain the water rights.

The area includes Palm, Murray and Andreas Canyons, each containing palms centuries old—a 10 mile fringe of them along the little stream in Palm Canyon alone. The view, from high points, is described as a "supreme surprise" by Director Mather of the National Park Service. "One stands transfixed, gripped by the scene, and as unable to express himself as if he were standing on the rim of the Grand Canyon."

The highway is good to Beaumont. By spring the paving is expected to be finished. Then the round trip from Los Angeles can be done in a day.

For 260 Foot L. A. Boulevard.

A plan to make east-and-west travel through Los Angeles easier by widening Tenth St. to 120 feet is on, and has the usual opposition from certain property owners. It also is proposed to rename the street—if and when widened—Lincoln Boulevard.

The real big Los Angeles idea, however, is to put Detroit's Woodward Avenue, 200 feet wide but its first 4 or 5 miles used for business, in the background among notable boulevards. Angelenos are agog over the plan to make Wilshire Boulevard, which is in beautiful environment all the way from the city to the sea, about 15 miles, 260 feet wide.

$20.87 for Each.

For the 2800 miles, Los Angeles to the Nash plant in Kenosha, Wis., William Milenz and his wife, in a Nash four, used $34.34 worth of gasoline, $7 worth of oil; total, $41.34, or $20.87 for each—less than 1 cent a mile, with 1000 pounds of luggage, including camping. Gasoline averaged 31 cents and 25 miles per gallon. At Chicago the tires had Los Angeles air, no punctures and the radiator had Albuquerque water. The tourists went the southern route to Kansas City, thence to Chicago on Jefferson and Lincoln Highways.

Colorado Motor Runs On Air.

Christman Edwards, formerly of Detroit, now of Colorado Springs, has invented an automobile motor operating on compressed air. He says it will develop 1000 horsepower!

WANT DEATH GATE MOVED FROM ROAD

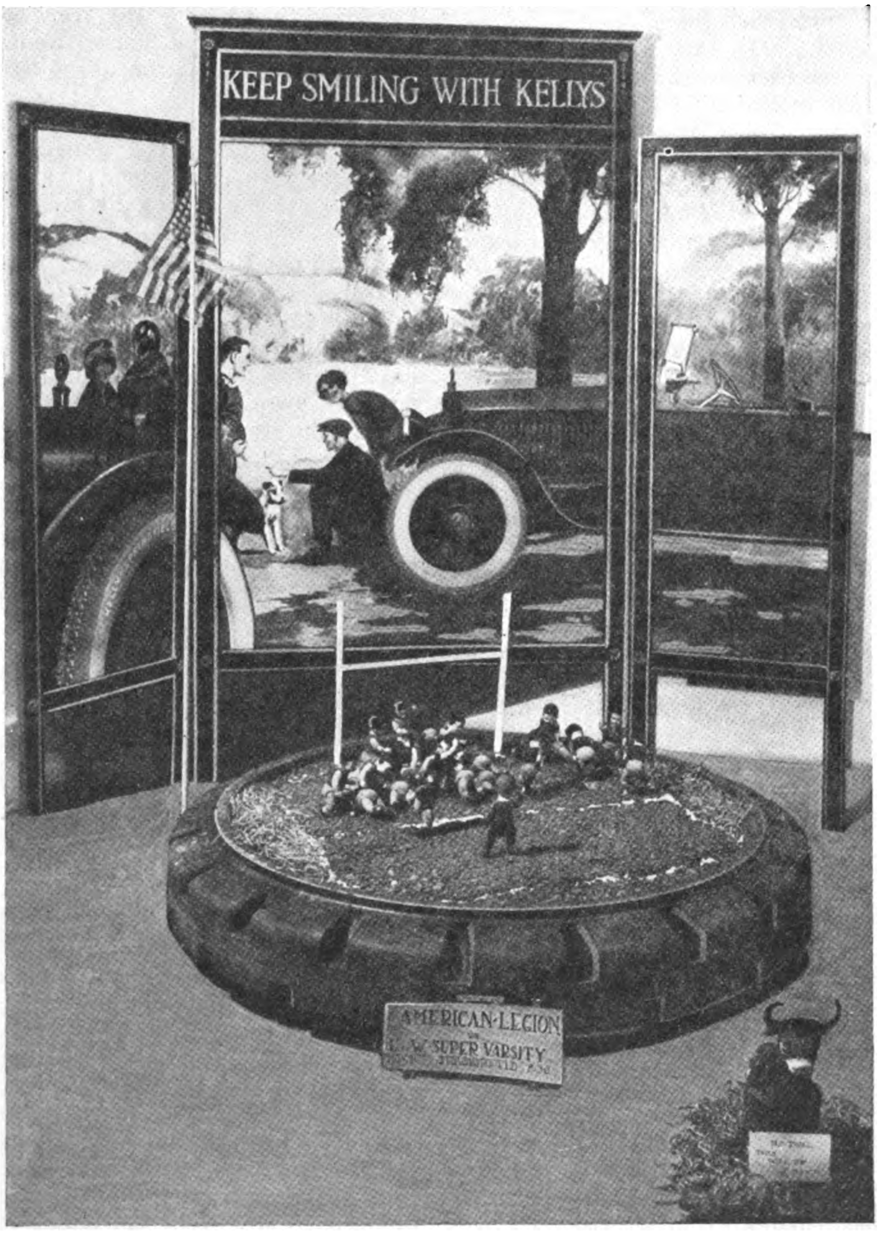
Bay City Club's Request Refused On Grounds that Most of Those Killed By Obstruction Were Drunk.

California State Automobile Association, through its president, George S. Forderer, has laid the matter of removing the Burlingame "death gates" before the San Mateo County supervisors. Through its good roads bureau the association has established that the south gate, on the east side of the highway, is on county property. This gate is the most dangerous of the four pillars which mark the entrance to Burlingame, and is the one where practically all of the accidents have occurred, as is attested by its battered condition.

These gates are within the paved portion of the roadway and are a constant menace to motorists. Especially is this true of the gate now found to be on county property, where several motorists met their death. At the instigation of California State Automobile Association the board of trustees advertised for bids to move the gates back from the roadway, but found it was without jurisdiction over property back of the curb line.

That these Burlingame gates have caused several deaths, should be sufficient reason for removing them or changing their position, according to the association officials.

Later news is that the board has refused to move over, off the roadway, the one gate it controls, its reason being that most of those who have been killed were drunk.



HOW A GRAYS HARBOR FIRM ADVERTISED A FOOTBALL GAME.

At Grays Harbor, Ore., a prize for the best window advertising of a Legion-Washington game was won by O'Hare & Reid. They clothed kewpies in the colors of the two teams and depicted one of the local team's well known plays. Observe the "Keep Smiling with Kellys" background. In another window they displayed war relics of other battlefields, in France, with the colors as a background and cards advertising the Red Cross roll call shown. The picture above is reprinted from Kelly-Springfield Advertiser, a live monthly in newspaper form, issued by Kelly-Springfield Tire Co.

A Notable Coast Merger.

It's Earl Cooper-Guarantee Battery Co. now—a merger of Earl P. Cooper, Inc., and Guaranty Battery Co., and occupying a building designed for the latter at 955 Post St., San Francisco. Earl P. Cooper, former race pilot (not so former, at that) is president; Fred J. Brand, vice president and treasurer; George E. Cushman, second vice president; Austin D. Rouse, secretary.

Mr. Rouse was Presto-Lite man in Northern California till he took it with him into the Cooper concern. He will manage sales in the merger. The other two, Messrs. Brand and Cushman, headed Guaranty Battery Co., said to be the oldest in its line in San Francisco if not on the Coast. Recently it completed its fifteenth year. In its line, now in the consolidation, were American Bosch, Gray & Davis, Dyneto, Delco-Remy and Simms-Huff. Another line, brought in by Cooper, is Lincoln shock absorber. The battery department remains a feature.

The Cooper branch in Oakland is included. It handles Alameda and Contra Costa Counties.

August Easterners on Coast.

Among visitors from the Eastern automotive centers to the Coast during August have been Colin Campbell, general sales manager of Chevrolet Motor Co., Detroit; John Nickerson Jr., Rainier Motor Corp., New York City; Frank P. Harrington, Dayton Rubber Mfg. Co., Dayton, O.; E. S. Sayers, assistant to the president of Garford Motor Truck Co., Lima, O.; Tom Gannon, general sales manager of Velie Motors Corp., Moline, Ill.; L. H. Shepherd, secretary of Racine Horseshoe Tire Co., Racine, Wis.; John B. Corliss, Michigan Lubricator Co., Detroit; S. J. Hunt, J. D. Streett & Co., St. Louis, Mo.

Moreland Profits Excellent.

Moreland Motor Truck Co., Burbank, Calif., netted profits totaling $27,160 in June, before income tax: equal to 35 per cent per annum on the capital stock issued. Moreland Sales Corp., Los Angeles, the selling subsidiary, made a 15 per cent showing under the same conditions. July figures are expected to be still better.

USED CAR SALES PUZZLE SPOKANE

Various Interesting Reasons Given for Unusual Demand—Show to Give Some Models First Appearance.

For Spokane's annual automobile show, to be held September 4-9 as a feature of the Interstate fair, a handsome structure is to be used, and all the space so far has been allotted already. More than 15,000 square feet will be used by Spokane dealers to display cars, and they have placed orders with the factories for late models. Several new models will make their first appearance at this show.

To provide sufficient space for all automobile exhibits it will be necessary to erect a tent outside of the automobile building. The main floor of the automobile building will be for car exhibits only. Accessories, gas and oils, tires and special attachments will be on the mezzanine floor.

Automobile firms which have engaged space are: Mitchell, Lewis & Staver—Mitchell, Jordan and Gardner cars; Rantz & Halstead—Franklin; Culton-Moylan-Reilly—Chevrolet; Spokane Nash Motor Co.—Nash; Logan-Grant—Chalmers and Maxwell; R. M. Wade—Lincoln and Ford; Transport Motor Co.—Velie; Finlay Studebaker Co.—Studebaker; Eldridge-Buick Co. —Buick; Oakland Automobile Co.—Oakland; Spokane Auto Co.—Davis; James E. Elam—Paige and Jewett; Ahrens & Ahrens—Dort and Stephens; March-Strickle—Star and Durant; Blackwell Motor Co.—Reo and Wills Sainte Claire, and Mack truck.

A special feature in the automobile building will be the model Standard Oil miniature city. This city will show the handling of a gallon of gasoline from the time it leaves the refinery until it is placed in the car.

The rapid sale of used cars in Spokane actually is beginning to worry dealers. One firm reports that in January there were more than three times the average number on hand, but late in July the total was only three or four, none of which had been in the shop more than 24 hours. The percentage of used cars being sold, in comparison with new car sales—smaller cars especially—is surprisingly high. Dealers cannot account for it. An explanation by one dealer is that the people who haven't the money for new cars buy used ones and turn them in later in part payment for new ones.

Another Spokane explanation of the used car situation is the condition of the money in the country. People who never have been able to buy a car have more money than they are accustomed to, still not enough to buy new cars, so they buy inexpensive used ones and get from three to seven years' service out of them.

The apparent economy of used cars is an attraction to many, although, it is stated it seldom is actual, and the repair bill on a used car, in the length of time it is used, easily will equal the difference between its price and that of a new car. Still, the amount is spread over a long period and the financial strain is not felt so much.

Some dealers believe the first payments required on new cars are prohibitive to some people who otherwise would buy new machines. This is the explanation given by several for the added volume of second hand car sales.

Spokane County motorcycle officers are being impersonated by ruffians who are holding up speeders and levying "fines" on them. As a result the deputies of Sheriff Long, patrolling the highways, are to be placed in khaki uniform, and each officer will wear a shield, and an emblem on his arm. The brown caps will not bear ornaments, as the officers declare they could not travel fast if wearing a high-front cap.

HOW WE DO FLOCK.

Misery loves company. So does joy. The swarming instinct crops out inevitably in everything worth while, also everything futile. Let half a dozen pedestrians pause to inspect an unusual motor car parked at a curb, and the crowd grows like flies around sugar. The chief reason for such swarming is the instinct of imitation. We talk a lot about being individuals, but ready at all times on nearly every tongue-tip is, "Come on, join the crowd."

There is no great lesson to be learned from studying the human swarming instinct. It is just one of the peculiar natural laws that cannot be altered by philosophy—part of the "destiny that shapes our ends, rough-hew them how we may."—L. A. Record.

Denver's Camp Record Broken.

More than 6000 automobiles, containing 20,000 tourists from every state in the Union, had been registered to August 1 at Overland Park camp grounds in Denver; a 50 per cent increase over 1921.

Claustrophobia is a dread of confined places. Many motorists have it these outdoor days.

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Yosemite Runs Attacked.

Much-advertised "economy runs"—meaning, apparently, one-car "stunt" runs—each year since about 1917, from the larger California cities to Yosemite Valley, seem in danger of incurring the ban of the park authorities, from recent reports. It is said these runs have an adverse effect on the general public's travel into the park mainly because the drivers of the cars, sent in shortly after spring's beginning, refer afterward to the roads as "almost impassable," whereas the regular mountain stage lines, starting in regular seasonal operation shortly after, report travel as fairly easy and comfortable, both over the westward and eastward outlets from the valley.

Even when not exaggerated, according to O. Van Wyth, Jr., advertising manager of Yosemite National Park Co., the publicity resulting from these trips does harm, because reports of bad conditions are published in detail two or three weeks afterward, leading the public to believe such conditions still exist. Following the Yosemite Lodge and Camp Curry runs of last May, motor travel was cut down heavily in May and June, he says, so that Superintendent Lewis of the park has suggested to the concessioners that trophies for such runs be discontinued.

Sacramento Show, Sept. 2-10.

Sacramento dealers will stage what is expected to be the largest automobile show in the city's history as a part of the state fair, September 2-10. Most of the space available was snapped up at the first drawing held by the Motor Car Dealers' Association of Sacramento, and practically all the independent dealers outside the association have stated they will exhibit. The dealers are not taking over management of the show, but merely exhibiting as a body.

First Durant from Coast Plant.

Without celebration, the first Durant car to be built on the Pacific Coast was turned out from the new million dollar factory of Durant Motor Co. of California at Oakland, August 1. For the first 30 days the plant is expected to turn out 50 cars daily, but Manager G. R. Scott hopes to increase production to at least 200 cars a day within 90 days. Output of the new Star car from the same plant will begin about September 1.

Messrs. Carroll and Powell, heads of the Goodrich offices in Los Angeles and San Francisco, respectively, went to Akron a few days ago.

TWO BIG CHANGES MADE IN SEATTLE

New Lexington and Moon Distributors Named—Signs Multiply That Taxing Is Becoming Intolerable

Seattle news includes passing of state distribution for two well known lines of passenger cars into new hands. These transactions are the outstanding events in a comparatively quiet summer business season, which is full, however, with portents of the most active autumn business revival Seattle has seen since the 1917-18 boom.

The Lexington car for Washington has been taken by Parsons Motor Car Co., 1515 Melrose Ave., headed by J. W. Parsons. It will continue the Stutz agency, held by it five years. "Jim" Parsons was a great name in racing annals in the era of dirt tracks and 600 cubic inch racing engines, before the war, but he retired from it all in 1916 to become one of Seattle's largest automobile distributors.

Bardshar Motor Co., 1621 Twelfth Ave., has been appointed distributor of the Moon car in Washington. This is in effect its resumption of the agency, as the Bardshar organization, an old Seattle agency dating from 1909, handled the Moon in 1918. It retains the Allen car agency for the state. The appointment for the Moon was made by P. W. Wisdom, Western representative for the factory, and who has headquarters in Los Angeles, in the course of a very successful business trip of the Pacific Northwest.

Kleiber Motor Truck Co., factory branch of the motor truck plant of the same name in San Francisco, has moved from 11th and Union Sts. to a new, larger location, 10th and Seneca Sts., where a larger display line of Kleiber trucks will find floor space.

Sands Motor Co., Studebaker distributor, sold more cars at retail in the first six months of 1922 than in any previous half year in its history; also more than in all of 1921.

Returning from a visit to the Oldsmobile factory at Lansing, Mich., where he attended the annual distributors' convention, A. R. Tyson, president of Oldsmobile Motor Co., Seattle, states that his allotment for Washington and Idaho will be 750 cars, of which 25 per cent will be closed models.

Because the recent annual state convention of Washington Automotive Trades Association at Olympia was strictly a business affair, members of King County Automotive Trades Association, embracing the organized Seattle automotive trade, will stage a "strictly pleasure" jaunt and picnic, August 20. N. R. Croson, heading the arrangements committee, says nothing remotely resembling business will be allowed to blur the festive atmosphere to be created by the 300 trade men expected to be on hand.

Admitting that not all motorists in Western Washington favor reduction of state taxes on motor vehicles, and that some would not object to further increases if the visible results were better highways and greater mileage of them, Automobile Club of Western Washington is preparing to urge a revision through its legislative committee. Motor vehicles in Washington represent 3.2 per cent of the total assessable wealth; all other property represents 96.8 per cent; but motor vehicles pay 21.5 per cent of total state taxes. For road taxes they pay 83 mills on assessed valuation; all other property pays 2½ mills. The club believes this is an injustice, calling for a change of some sort. By postcard it is asking the opinions of its extensive membership west of the Cascades, presenting five suggestions of alternative modes of taxation:

1—Special taxes for maintenance only, construction only, or both, of state roads, levied on motor vehicles.

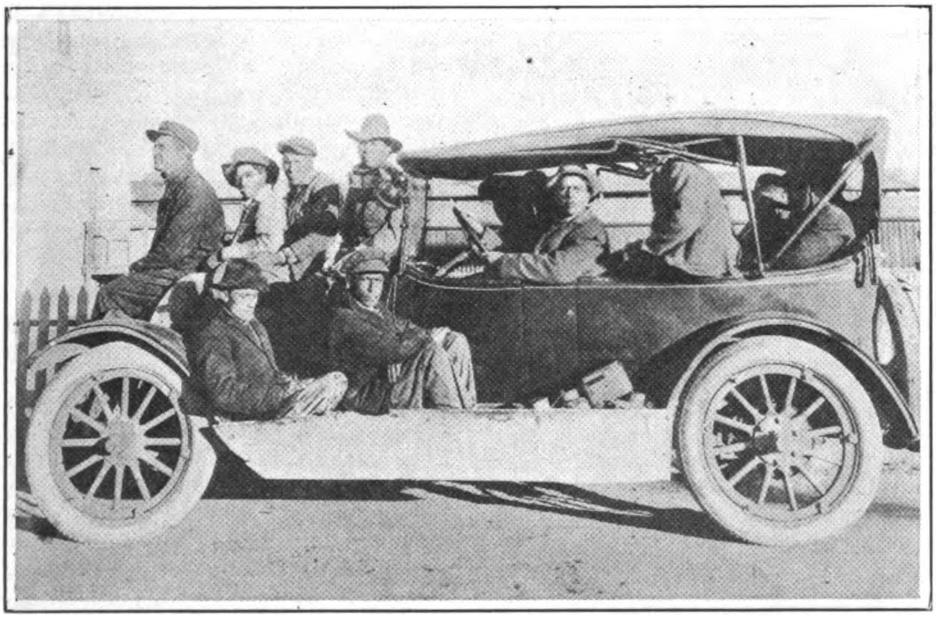
2—Continuation of present special taxes on motor vehicles, or an increase or a reduction.

3—Continuation of the present mode of collecting these special taxes, which is by a license tax, a driver's tax, and a gasoline tax.

4—A flat rate registration fee to cover state motor vehicle registration expenses, and all special taxes to be collected through a gasoline tax, or—

5—A flat license tax not exceeding $10, and a gasoline tax, to provide funds for state purposes.

Filling the more direct service needs of its members, the club also has assured them of uniform and moderate tow service throughout Western Washington during the 1922 touring season. According to its mechanical service contract with official garages, these will charge a minimum of $2.50 an hour for towing services to club members, and $1.25 an hour for each helper. Towing any distance more than 5 miles costs $2.50 Repairs and towing more than 5 miles cost $2.50 the first 5 miles, and 50 cents each additional mile.



THIS BUICK BEGAN LIFE AS A 5 PASSENGER CAR. LOOK AT IT NOW.

The picture does not depict a "stunt." Leigh Titus, of Santa Rita, N. M., was interested in the construction of the new hospitals at Fort Bayard, 6 miles out, on a very hilly, rocky road. Friends told him his using his 5 passenger Buick to carry 24 men back and forth would kill the car in two weeks, but after 4 months, with only three Sundays excepted, one broken front spring was the only damage. To that time the car had been used 34,000 miles. The extraordinary load varied from 2800 to 3500 pounds, with 6 to 8 men in the rear seat, 3 or 4 on the front seat, 4 on the hood and 1 to 4 on each running board. Once, with 18 passengers, Mr. Titus drove the hard six miles in 22 minutes.

The 1922 Touring Crop.

The 12 district offices and 7 touring bureaus of California State Automobile Association are among the busiest places in Northern California. Since the opening of the touring season 50,977 motorists have called at the main office in San Francisco, and the branches. George S. Grant, manager of the association's touring bureaus, says 884 transcontinental motor parties have been supplied with strip maps and detailed road information, and 5369 motorists have been routed to neighboring states. All indications, he says, point to a late touring season this year.

PORTLAND GOING AGAIN FULL TILT

Folks Sat Back When Price Reductions Were Rumored and Came, But August Sales Look Good.

Dealers throughout the Portland district continued to do excellently in July, and August promised to hold up the good record of the past several months. In July, according to Portland Ford dealers, more Fords were delivered in Portland than ever before in one month—the total was approximately 525. The total for the state exceeded 1400. The sales in Portland would have been higher but for difficulty in obtaining cars, it is claimed.

Nearly all other well known cars sold well in the first part of July, but later people sat back and watched the price reductions, and rumors of such reductions for August 1. In the medium price field this was noticeable particularly.

With reductions announced by a number of the best known companies about August 1, the atmosphere cleared a great deal and an excellent month is indicated.

Further steps have been taken in Portland towards state automobile trade organization. With the successful experience of both California and Washington in mind, Oregon is eager. It is handicapped by many sections of the state being so sparsely populated, and the larger towns are considerable distances apart.

The new Multnomah County Automotive Trades Association has been fully launched and there will be a state session early in September, to get a state body under way. The Multnomah County Association is really a stepping stone towards the state body. It is a union of the Automobile Dealers' Association of Portland and Portland Automotive Trades Association. These officers were elected:

President, C. H. McGirr, head of Union Depot Garage Co.; vice president, C. L. Boss, head of the C. L. Boss Automobile Co.; secretary pro tem, Ralph J. Staehli. Mr. McGirr is president of the Portland Automotive Trades Association, and Mr. Ross is an active member and a director of the Automobile Dealers' Association. Mr. Staehli is secretary of the dealers' association.

D. W. Sanford, head of the Portland branch of Goodyear, has returned from a trip of several weeks with W. H. Goodwin, Ford branch head. They covered practically the entire state of Oregon by automobile, traveling 1600 miles, mainly to meet dealers. They stated all indications are for a healthy fall business in both automobiles and tires.

Prasp Motor Car Co., formerly Portland distributor for the Lincoln, has taken over the Moon car for Oregon and Southwest Washington and is back in its old location at Eleventh and Couch Sts. The company, headed by F. W. Prasp, was out of business a couple of months, following the taking over of the Lincoln by the Oregon branch of Ford Motor Co. The building has been remodeled completely. The Moon was represented in Portland a couple of years ago, but since then had not had a distributor in Oregon.

Promotion of W. J. Richmond, who has been factory representative for Chevrolet Motor Co. for the Pacific Northwest, with headquarters in Portland, to be assistant sales manager for the Pacific Coast, is announced. Mr. Richmond has gone to Oakland headquarters. He will work directly under F. N. Coats, general sales manager for the Chevrolet on the Coast. Friends of Mr. Richmond in the Northwest, prior to his departure, congratulated him on his new and important post, though regretting his departure. His successor has not been announced as yet.

CROSS 'EM CAUTIOUSLY!

Railway tracks in and of themselves constitute a warning of danger, and persons approaching a crossing can never assume that there is no danger. The demand of the public for speed in the transportation of passengers and property has increased the hazard. Nearly one-half of all the accidents at grade crossings on lines have resulted from a disregard of warning devices. There is a constantly increasing disregard of gates, which continually are being run into and broken.

I desire to make an earnest appeal for sympathetic interest and co-operation in making effective the campaign which has been undertaken by the Safety Section of the American Railway Association. The public must awaken to the importance of conserving human life and of avoiding the tremendous economic waste resulting from a growing disregard of the ordinary dictates of prudence.—I. L. Hibbard, General Manager A. T. & S. F. Coast Lines.

Employes of the Portland branch of William L. Hughson Co. enjoyed a company picnic at Dodge Park, a popular resort about 30 miles from Portland. About 150 persons participated. Arrangements were in charge of Branch Manager Stoner and a special committee.

San Diego Trade Notes.

Justin Hammond is announced as Haynes dealer in the San Diego territory. He has established headquarters at Broadway and 14th St., San Diego, and will wage an aggressive sales campaign, with emphasis on the service feature. His service station is thoroughly modern, with Haynes experts in charge.

The other new car agency in San Diego is for the Stearns-Knight. It has been taken for San Diego County by W. F. Zahm, head of Sixth St. Garage, 735 Sixth St.

USL storage batteries will be handled in the same territory by Shaw Brothers, 1141 First St.

C. W. McCabe, Dodge Brothers dealer, celebrated the end of another successful 12 months at a banquet attended by the 27 members of his organization at San Diego Country Club at Chula Vista recently. Business so far this year is 34 per cent greater than in all of 1921, he states.

Would Regulate Slow Drivers.

Legislation designed to hit the wilfully slow driver, and regulate him as well as the speeder, will be sought at the next session of Oregon's legislature by T. A. Rafferty, chief inspector for the law enforcement bureau of the state's motor vehicle department. Mr. Rafferty says a person driving a car too slow on the state highway is a menace to traffic, retarding cars following and causing others to take chances in passing. State laws should provide both a minimum and maximum speed, he urges.

Nares for A.A.A. at Fresno.

L. A. Nares of Fresno has been appointed official A.A.A. contest board representative for the Fresno district, which includes the San Joaquin Valley region. He has acted as contest referee in races held on the Fresno one-mile speedway, the past two years.

Can Search Cars Without Warrant.

M. Lambert declared, in a suit, that "dry" agents had no right to search his motor car for wet stuff, without a warrant, but the other day the U. S. circuit court of appeals said they can do it, except in cases excepted by the Government.

Huge Automotive School Picnic.

National Automotive School, of Los Angeles, had an attendance of more than 1000 persons at its recent annual picnic in Pasadena. Prizes for athletic and other contests, plenty of refreshing nourishment, and so on, were provided.

DEMAND IS STEADY IN SAN FRANCISCO

No Tangible Strike Effects Yet, Sales Excellent, New Models Plentiful and General Interest Lively.

Demand is steady in San Francisco, the distributors, generally speaking, have no ground for complaint regarding the factories' attitude as to prompt shipments, and they believe any change henceforth will be an improvement, culminating in a busy autumn. son.

The countrywide railroad strike and its hindrance of industrial revival is not overlooked, but automobile men in Northern California have not found anything really tangible to worry over, as yet.

Sales rooms and city streets are replete with new automobile models, showing that the space of time between being unloaded at railroad terminals and being put at the buyer's service is a short one.

The Haynes 7 passenger touring model 75, Studebaker touring sedan, Winton roadster, Gardner sedan and business coupe, Wills Sainte Claire town car, Hudson 7 passenger sedan, Stanley 740 5 passenger touring car, and the complete Buick and Oldsmobile lines for 1923, have brought an unusually strong tide of buyers into the distributors' neighborhood.

Hundreds of vistors have been on hand daily at the sales room of Howard Automobile Co., Buick distributor, as news of the new models' arrival was noised abroad. However, there might have been no representation in San Francisco and Oakland for 1923 until possibly many days later, had not C. S. Howard, president, mindful of railroad transportation hazards, telegraphed R. C. Thompson, general manager and then at Flint, to rush enough cars Coastward by express for display in the San Francisco region.

John H. Morgan, Stanley steam car distributor, has received several carloads of the new 740 models, and a complete line is on display. Coming from Massachusetts, they met with many delays due to the strike, and the Morgan organization had many anxious days in answering the inquiries of long-waiting customers.

During the recent visit of H. H. Brooks, general sales manager of Nordyke & Marmon Co., Indianapolis, to San Francisco, he stated that Marmon sales in Northern California through Butler-Veitch, Inc., were 75 per cent greater in the first half of 1922 than in the same portion of last year.

Chevrolet sales in San Francisco in July were 382 cars. Anderson-Smith Motor Co. was 100 cars behind orders at the end of August 1, although delivering 20 to 30 a day.

Cole Motors, Inc., headed by C. T. Dunkle, treasurer and general manager, reports that nearly every freight train coming into California includes one or more carloads of Cole 8-90 models, to fill orders already on distributors' and dealers' books.

Bruce Daniels, Western representative for Stutz Motor Car Co. of America, found that conditions for higher priced car sales are exceedingly good throughout California, in the course of a statewide tour recently. In San Diego he closed an important contract for a direct factory franchise. More than $50,000 worth of parts are now stocked at depots in San Francisco and Los Angeles for the convenience of dealers in meeting owners' service needs, while service men direct from the Indianapolis factory are located in both cities to look after servicing operations.

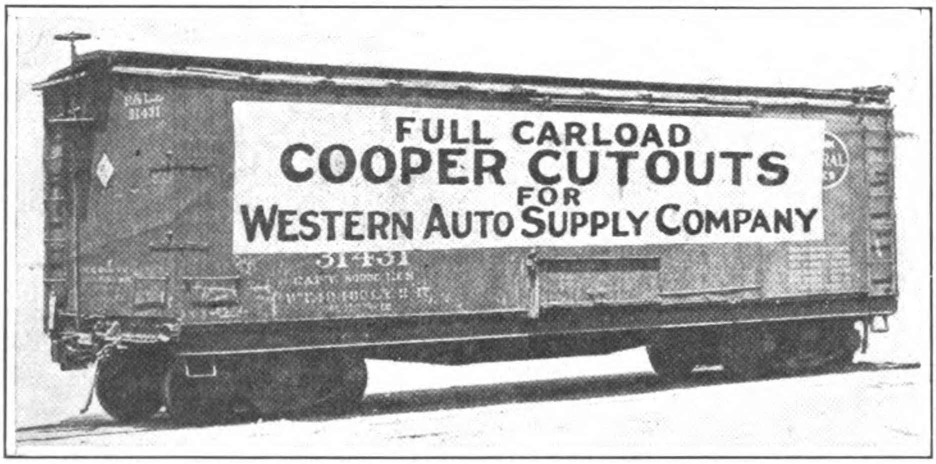
A similar view of general conditions is given by J. R. Findlater, Pacific Coast representative and vice president of Earl Motors, Inc., Jackson, Mich. He made a trip that took him from Canada to Mexico before returning to headquarters in San Francisco, and says: "Everywhere I found conditions more than ordinarily encouraging. They are as a whole strongly upgrade, which naturally created a big automobile demand. On my trip I appointed high grade distributors in Seattle, Portland and San Diego."

Bill Hunicke has been made sales manager for Charles A. Kaar Co., Rickenbacker and Lexington distributor. He saw active service in France and was a captain of artillery there two years.

R. J. Timmons, formerly with Maxwell Motor Sales Corp. in Chicago, and with many years' experience as a sales executive, has become retail sales manager for L. M. Field, Inc., Northern California distributors of Earl cars and Selden trucks.

R. Jackson Jones, Western representative for Traffic Motor Truck Co., St. Louis, has appointed H. M. Chambers Pacific Coast district manager, with headquarters in San Francisco. Mr. Chambers came to San Francisco for Pierce-Arrow in 1903, and has been prominent in truck distribution since.

More than 900 Hupmobile owners, and the employes of Greer-Robbins Co., San Francisco branch, attended a very successful outing organized by Bob Galindo, sales manager. It was at Sawyer Park in the Spring Valley Lake district, down the Peninsula. More than 200 Hupmobiles formed the caravan, which was headed by Mr. Galindo in the famous All-Capitals car, making a 90 mile tour of San Francisco streets and country highways, with a barbecue dinner as the finale in the woodland shade, with ample water roundabout.



CONCERNING A CARLOAD OF COOPER CUTOUTS SENT TO THE COAST.

Some worth-while points about the picture: Ordering a carload of one kind of article, cutouts, indicates the great variety and volume of Western Auto Supply Co. business. Also, so rich a market is the Pacific region that many a train to the Coast contains car after car full of motor vehicles, supplies and accessories and tires. Also, Cooper cutouts have made a winning because they have qualities which have been advertised adequately. They are light, are installed easily and have positive yet sensitive action. They reveal the slightest miss or compression leak, and are designed so that when the flapper is raised the muffler is cut out entirely, giving the exhaust free passage, eliminating back pressure and thus giving the motor utmost power opportunity.

Willard Agency Head Resigns.

A. J. Tobey, president of Western Auto Electric Corp., Los Angeles, distributor of Willard storage batteries, announces he has sold his interest in the company and resigned. He makes no statement as to his plans except that he will continue in the automotive trade.

C. T. Holcomb, assistant manager for many years, succeeds Mr. Tobey as vice president and general manager.

"Opportunity and the man."

RAILWAY STRIKE JARS L. A. TRADE

Long Siege Will Hurt Sales, Which Have Been Breaking Records and Causing Rosy Visions.

The sudden extension of railroad strike conditions into Southern California, almost eliminating one large transcontinental system, with no assurance that paralysis of all steam-driven transportation may not become complete, has given temporary pause, to the bright dreams Los Angeles distributors have had of a vigorous early fall business. If prolonged, and despite motor - vehicle - to - the - rescue facts, the strike will hurt distributors, dealers and consumers alike, especially in the so-called back country, comprising "desert" California, Arizona and Nevada. Los Angeles automobile men are fully awake to the possibilities, and their association is resolved to do all in its power to relieve any real distress arising.

The strike has been on some time, and even its latest phase has not yet affected the normally prompt arrival of carload shipments from the factories, and sales may well have been stimulated by apprehension of a shortage.

Paul G. Hoffman, Inc., reports that the first ten days of August were the busiest ten days it ever has encountered. August 10 it sold 23 new Studebaker cars at retail, and sales and delivery departments have been working overtime.

Paige Co. of Southern California, headed by J. M. Sterling, sold 507 cars in Southern California in 1922 up to August. In all of last year, in the whole state, sales totaled 411. June and July this year, expected to be slack months, were record breakers for Paige.

Buick sales in California, the first half of 1922, exceeded the same 1921 period more than 57 per cent, Howard Automobile Co. states. The 11 southern counties took 2239 Buicks; the remainder of the state, 2080.

Haynes sales in Southern California in the first six months were 143 per cent over the same period of 1921, according to Lynn C. Buxton, distributor.

Western Motors Co., in the first half year, showed an increase of 936 per cent in business, compared with 1921, according to Sidney T. Briggs, manager. Throughout California its business has grown 860 per cent.

Reo Motor Car Co. handled in the first six months of 1922 a business 400 per cent greater than in the same part of 1921, in Los Angeles and vicinity, in Reo cars and trucks.

Earle C. Anthony, Inc., sold 657 Durants in California through its branches during May and June.

Robert P. Fite, authorized Chevrolet distributor in Los Angeles and Kern Counties, has contracted to sell 4002 Chevrolet cars and trucks at retail during August.

Union Motors, Inc., reports that the Maxwell now stands sixth in California registrations. In the first week of August, 47 carloads were received, Sales Manager C. A. Doyle stated.

Another special event of early August was the arrival of the new complete 1923 line of 4 and 6 cylinder Buick cars. The news of their coming drew larger crowds than ever before had thronged the large sales room of Howard Automobile Co. on Flower St. Following the first showing, August 1, between 2500 and 3000 persons inspected the line between Tuesday and Saturday.

ADVERTISING.

The two Wrigley factories in Brooklyn and Chicago are turning out an average of 43,000,000 sticks of gum a day.

What built up this enormous business in a few years?

Answer: Advertising!

Admittedly, Wrigley had to have a gum that pleased the public taste. But many other gum companies, with a satisfactory product, remain small because they haven't advertised on a big scale.

Philosopher Emerson was wrong. You may make a better mousetrap, but the world won't beat a path to your door unless you get your message to the world by advertising.

Advertising is the lantern that finds business in dark times.—Los Angeles Record.

Factory offerings for 1923 already on hand are already numerous and noticeable. Prominent are the new Westcott touring types, and the complete Oldsmobile 4 and 8 cylinder line for next year. Other first appearances are the Hudson 7 passenger sedan, Wills Sainte Claire limousine and Oakland business coupe. The new Peerless models are promised for August 26 by Stanley W. Smith, Inc.

Service Truck Sales Co., factory branch, announces the complete Service truck line now is available in the ¾ and 1¼ ton Red Pyramid speed models, also the 1½, 2, 3, and 4 ton heavy duty types. The branch now is carrying $65,000 worth of trucks and parts, states F. G. Whipple, manager.

Important in the commercial vehicle field is the return of Stewart trucks to active representation in Los Angeles. E. E. Weber Co., 1957 South Los Angeles St., is distributor for the line, consisting of 7 models ranging from ¾ to 3½ ton capacities, and equipped with Continental and Buda engines. E. E. Weber, general manager, says a complete line is on display already.

R. J. Flynn, former Willys-Overland branch sales manager at Hartford, Conn., has been transferred to a similar post in the Los Angeles branch of Willys-Overland Pacific Co.

Harry M. Zier has been made sales manager of Earle C. Anthony, Inc. In 1905 he bought the second Packard sold by Mr. Anthony, and in 1915 joined the organization. In 1918 he was an A. E. F. liaison officer. Later he was Anthony's branch manager in San Diego, and later in Sacramento.

H. W. Curtis, recently sales manager for Chevrolet Motor Co., Oakland, has become sales manager for Robert P. Fite, Chevrolet dealer. At one time he was a large Maxwell and Chalmers distributor at Pittsburgh, and later was Western factory representative for Apperson Brothers Automo-

J. C. Christen, with 7 years Coast experience, chiefly with Willys-Overland Pacific Co., has been made sales manager for California-Stearns Co.

Stanley W. Smith, Inc., is the new name of the Peerless agency, formerly known as Smith Brothers, located on South Figueroa St. below 16th St. for 8 years, and founded in 1907 by Stanley W. and Clarence F. Smith. Clarence was killed as a major, leading his battalion in the Argonne in 1918.

At the regular August luncheon of the 60 distributors and dealers making up the Motor Car Dealers Association of Los Angeles there again was much discussion, favorable and otherwise, of the various measures being taken by city and county authorities to solve or mitigate the ever urgent traffic problem. H. Z. Osborne, Jr., chief engineer of the city's board of public utilities and executive chairman of the traffic commission, spoke at length on the possible means of solution. The trade men discussed the suggested plan that would prohibit automobile traffic from street car tracks between crossings in the downtown section, and voted against it unanimously.

Chenu to Make Record Runs Hard.

Charles J. Chenu, head of California's motor vehicle department, says record runs on highways henceforth will be hard on the runners—they will be served warrants in all counties traversed and will be jailed if he can so arrange it. The practice is wrong in principle and in law, he points out.

Keep summer in your heart. It pays.

TWO HUNDRED HEAR MOTOR TRUCK TALK

Owners Representing One-Tenth of All in Los Angeles Absorb Tips of Much Value at a Banquet.

Writers of news, near-news and editorials sometimes figure that if one reader is heard from, as to something that has been put in print, probably 100, maybe 1000, among as many as the 12,000 readers of Motor West, have at least seen it and to some degree absorbed what it was desired to drive home.

It is estimated that the 200 persons who attended the banquet of the Truck Owners' Association of Southern California, July 31, at the Los Angeles Athletic Club, represented 1000 motor trucks, or one-tenth of the 10,000 or so in the city. If they told of the good things they absorbed—mentally—each had to tell less than ten absentees, not 100 or 1000, and some mighty good information was spread.

Among the speakers were Judge Benjamin Bledsoe; Jack Tehen, motor truck committee chairman of Motor Car Dealers' Association of Los Angeles; Judge Lyon, police magistrate; Roy H. Compton, advertising manager and then some, of Mack-International Motor Truck Corp.; also John L. Allen, Alvin Key and John T. Hauser, who are president, treasurer and general counsel, respectively, of the truck owners' association.

Judge Bledsoe said something! He said in effect that scientific knowledge of the proportion of highway costs motor truck men should bear should be the basis of any plan to tax trucks more. To amplify his logic—to get its true value: The present method is unscientific, i. e., unfair; highway robbery, so to speak; even worse in other states than in California.

Mr. Tehen told how the merit of motor truck transportation had so deeply penetrated railway intelligence in the East that it was being given preference in handling local traffic.

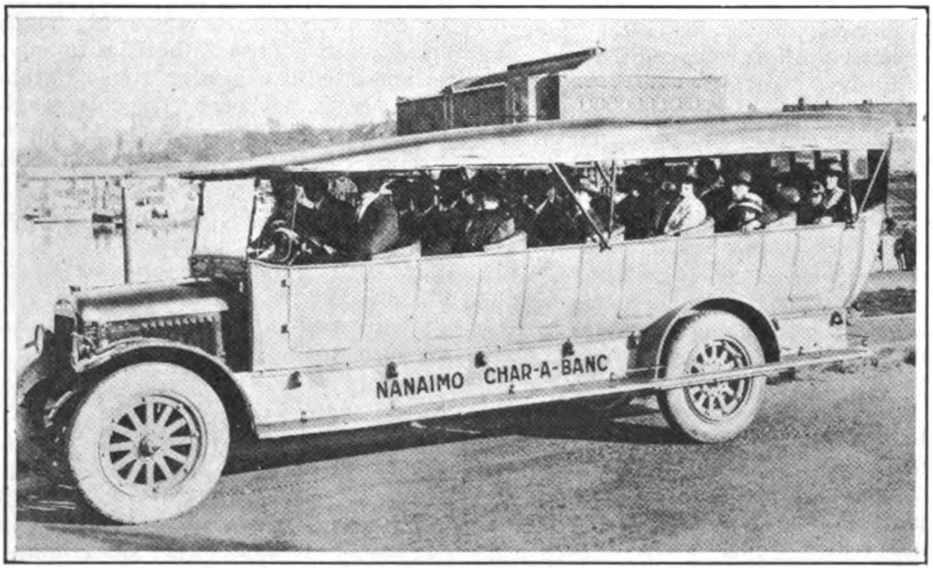
Mr. Allen told how foolish it is to believe motor truck men are wilful road destroyers. Poor roads put trucks in the boneyard prematurely, he said—or words to that effect.

All the talks were an excellent reward for the attention paid by the listeners. They were told to tell all and sundry this important thing: The association offers a free law course to those who will attend it. It will teach them truck laws. Knowing them will prevent spending many thousands of dollars, in the aggregate, as fines. A case in which ignorance costs more than knowledge. Phil Jacobson, secretary and manager of the association, saves many a member many times the annual dues, as a friend at court, but letting Phil do it may spell failure some time; hence the advice to take the law course.

Like Rocky Mountain Park.

Rocky Mountain National Park, in Colorado, had 40,000 visitors to August 1, against 30,600 to that date last year; an increase of nearly 10,000.

"Angels must weave poems where the waving poppies play."



RUGGLES CHAR-A-BANC, RUNNING OUT OF NANAIMO, VANCOUVER ISLAND.

A new Ruggles passenger bus of the popular char-a-banc type was delivered recently for use in and out of Nanaimo, Vancouver Island. It carries 24 persons. The owner says it operates economically. Its body is on a Ruggles model 40 chassis which has 168 inch wheelbase, the Ruggles specially built engine and the Ruggles double reduction rear axle, which obviates unnecessary wear and is adapted to char-a-banc service, in which a heavy pay-load is almost a constant factor. The body is Ruggles gray, the fenders a good glossy black. The outfit is said to be unusually handsome in form and color.

Lexington's Great Salt Lake Feat.

An unequalled feat for stock cars was a recent one on Penitentiary Hill in Salt Lake City, by a Lexington Thorobred that Lexington Salt Lake Co. had used as a demonstrator for 30,000 miles. The feat demonstrated the claim that an Ansted engine retains its original efficiency while the car lasts.

The hill's base has a 6 per cent grade; at the top it is steepest, 11½ per cent. With 4 passengers, from standing start on the grade, the car accelerated constantly, going over the top at 35 miles an hour. Then, without change of carburetor and again with 4 passengers, it made an economy trip up the ¾ mile hill at 21.3 miles per gallon.

Like all other Lexingtons, the car had not only the Ansted engine but the Moore multiple exhaust system, eliminating back pressure and increasing engine power remarkably; and the Lexi-gasifier, an iron grid in the manifold which is said to be literally a gas-making device, vaporizing all the heavier fuel particles.

If the Gasoline Tax Comes.

Legislation is wanted by California's state highway commission, to increase motor vehicle license fees and levy a gasoline tax of 2 cents a gallon. It is estimated unofficially that, in addition to increased fees, the gas tax would cost, on 689,163 cars registered to July 1 this year, $3,583,647.20 per year more than now, if each car goes 100 miles a week and 20 miles per gallon. Fees paid in the first half of the year totaled $7,219,160. The total, if the additions desired are exacted, is estimated at $15,000,000 a year.

Red Lights on Safety Isles.

For a while, roped areas were used to protect Los Angeles pedestrians while boarding street cars downtown. San Franciscans are provided with permanent concrete platforms, called isles of safety. Motor cars having bumped into these at night, with unpleasant results, each now has, at its "business" end, a concrete pillar, almost man height, and on the "business" side of this glows a red lens, the light being by means of wires from underground.

No Ads on Your Car in B. C.

British Columbia does not let motor cars carry advertisements, even on spare tire covers. As to a Durant durability four that reached Vancouver, recently, the driver had to remove the hood, tire cover and doors, and canopy the back body panels. It had done 25,000 miles, averaging 21¼ miles per gallon of gas and 432 miles per quart

A QUALITY POLICY FOUND TO BE BEST

Samson, Pioneer Coast Tire Plant, Has 67 Per Cent Gain in Five Months as Reward for Thoroughness.

There is nothing the matter with the tire industry in California, viewed from a manufacturing standpoint, as is evidenced by the great activity at the plant of Samson Tire & Rubber Corp., at Compton, near Los Angeles.

According to Mr. A. Schleicher, president and general manager, the Samson plant is operating day and night, in 8 hour shifts, to meet the unprecedented demand for Samson Super-Cord tires, which has grown progressively during the summer, shows no sign of abatement in August and, from every indication promises to continue well into the fall. Mr. Schleicher said:

"We increased our production capacity in some departments 200 per cent, and other departments 400 per cent during the winter and spring, by the addition of nearly a quarter of a million dollars worth of machinery and building additions;. and to have this enlarged plant operating at full capacity, day and night, is indeed a good testimonial of the continued and rapid growth of our business.

"You know we do not supply any original equipment to manufacturers of automobiles, and our product is absorbed entirely by the consumer, to replace tires which he has worn out. Besides this we supply large quantities to the rapidly growing transportation stage line business.

"At this time, when there is so much talk about tires being built 'too good' and a decision on the part of some manufacturers to build a less durable product at a lower price, we have exactly the reverse opinion—substantiated by a gain of 67 per cent in the first five months of 1922 in our production and sales, of a product in which our constant effort is to increase the mileage for our consumer user.

"The reason for Samson popularity is to be found in the unusual construction, strength, oversize and nonskid qualities built into these tires; points valued highly by the user, who, in addition, demands an economical tire that will deliver the most mileage for his money, with freedom from blowout worries, and with a nonskid efficiency that adds greatly to the safety of himself and family during wet weather.

"While there are arguments in favor of building a cheap product in order to get repeat business for certain manufacturers who say they are unable to keep their plants busy on a better-quality product, we believe there is a large proportion of people, particularly on the Pacific Coast, who demand a product that measures up to their requirements of mileage and safety and who are not willing to risk their lives with inefficient nonskid tires, or waste their time changing inferior tires when they can' procure, for practically the same amount, a tire of unquestioned quality and dependability.

"During the last six months or year of constant price depression—which depressions have in many instances, we are told, been offset by depreciation of quality—we have been more careful than ever to maintain our quality, to add to its dependability and to guarantee our dealers and their customers the usual Samson quality.

FALL AND WINTER.

Conditions at the close of the first half of 1922 indicate business will expand moderately during the autumn and winter. It is now one year since the definite beginning of recovery from the depression of 1920-21. Progress was slow until the close of 1921, but in 1922 improvement has been rapid. Money is cheap, the crop outlook excellent. With few exceptions, stocks of raw materials and manufactured products are not larger than necessary to bridge the normal period between production and consumption. Commodity prices are rising. The movement at present seems to be primarily one of adjustment between the different classes of commodities, and as long as the upward tendency does not assume a speculative character, it is a favorable factor. Except for strikes, there is little idleness. Production has expanded steadily since the beginning of the year.—National Bank of Commerce of New York.

"Our policy," concluded Mr. Schleicher, "upon which our business has so persistently and steadily grown to its present proportion, is expressed in a few words: 'Samson Tires Must Make Good or We Will"; and to be able to fulfill the exact meaning of this phrase is only possible by striving at all times to build a tire of unusual quality."

L. A. to Buy Automobiles.

Los Angeles' city council has received 10 offers of 50 automobiles for from $39,000 to $47,500, net after allowances for cars now used by the police. Cars offered include Chevrolet, Buick, Cleveland, Durant, Studebaker and Dodge Brothers. Ten motorcycles of 3 makes are offered in 4 bids of $2800 to $3600.

California's Petroleum Record.

California's total petroleum production to December 31, 1921, was 1,463,781,378 barrels of 42 gallons per barrel. Of this, 175,000 barrels was produced before 1876, which year's production was 12,000 barrels. The first peak was 690,333 barrels, in 1888. In 1889 there was a drop to 303,220. Then production went to another peak, 103,623,695, in 1914, dropping to 89,566,779 in 1915, and again rising, the 1921 production being 114,849,924. A tabulation by fields, and based on Standard Oil figures, was printed by Mining and Oil Bulletin, Los Angeles.

In the same journal an article by H. S. Botsford, manager Puente Oil Co., Los Angeles, contains pictures illustrating, by means of a barrel and an automobile, the relative proportions of oil production and automotive growth.

In 1911, in California, average production, with 60,779 motor vehicles, was 1334 barrels per vehicle; in 1916 it was 391 barrels for each of 232,440 vehicles; in 1921 it was 189 barrels for each of 604,187 vehicles.

Nationally', in 1911 the average was 315 barrels for each of 700,000 vehicles; in 1916 it was 86 barrels for each of 3,512,000 vehicles; in 1921 it was 47 barrels for each of 9,500,000 vehicles.

Big L. A. Truck Order Unplaced.

Not yet ordered—107 motor trucks of 2½ and 5 ton capacity, by the city of Los Angeles. The matter is to be considered by the city council August 17—finally, it is said. The city engineer analyzed nine bids and compared ownership costs with present rental costs, and reported an apparent advantage exceeding $175,000 a year in the former. He said it might be well to buy 10 5-tonners and 39 2½-tonners to replace the present garbage wagons, as a tryout before ordering the whole 107 contemplated. Also, he reported the Mack bid, though it is $579,000—not the lowest by any means—desirable as he said that truck would be most economical for the city.

Durant Portland Sales Active.

Pacific Motor Co., Portland, distributor of Durant cars in Portland, and Multnomah, Hood River, and Columbia Counties, was incorporated in May, 1922, and has handled in the last three months a business three times as large as was originally looked for. The concern temporarily is at 100 North Broadway, but will take larger quarters early next year. It is capitalized at $100,000, and, in addition to its direct retail business, has established a number of dealers. The Star car, another Durant product, will be added soon for distribution in the same territory.

Motor West
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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AUGUST 15, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

The Latest Price Reductions

AUGUST is marked by more motor car price reductions. Aside from increasing sales, which of course is desirable, one effect will be to hasten the survival-of-the-fittest process. With exceptions, it means making stronger the strong companies—those strong as individual concerns and those which have merged with others—and weakening those that found it hard, even before this latest drop, to stand the gaff; particularly those that know not how to advertise.

In the tire field, reduction in price by those whose product is sure to remain first class will serve a good turn to the public, not so much in respect to immediate as in ultimate cost, by tending to discourage marketing of cheap but shoddy stuff.

Wise to Aid in Headlight Matter

CALIFORNIA'S motor vehicle department is said to have been glad, indeed, to accept California Automobile Trade Association's offer, to improve enforcement of the headlight provisions of the motor vehicle code by sending two illuminating engineers through the state to establish testing stations. Beginning in the North, these men have moved south and now are well on their way to a finish in the beneficent undertaking.

Their work alone, however, is not sufficient. It needs hearty police co-operation to get to the testing places the large percentage of motorists who, oddly but nevertheless, require this compulsory education. Many users seem to expect headlights to be self-operating, self-adjusting, self-cleaning, and self-repairing. Without police guidance, it appears, it never would occur to them to help themselves—and the public they endanger—either by studying their lamps or by seeking the places where they can be shown.

Dealers everywhere should do what they can to make the police act. Not only will that improve dealers' business generally, by encouraging car owners who would motor more if it were safer, but it means a considerable sale of the things by which a headlight is made to be what it should be.

People Pay for Investigations

TO be suspicious always, is not wise. To look below the surface, and to see and hear "the other side," always is. In the daily newspapers, one easily gets the impression that investigation of oil interests is desirable. Perhaps the Federal Trade Commission's recent probe into gasoline prices was. Yet surface facts, or facts only on one side of the fence, do not always tell the whole story.

On the oil men's side, as to investigations, Mining and Oil Bulletin, Los Angeles, recently said it is to be hoped men in the automotive industry do not fail to see the superficiality of continuous political interference with an allied industry that provides their fuel, nor fail to understand that the eventual consumer of petroleum products pays investigation costs, as costs to the investigated companies naturally show in the selling price. In addition, a horde of investigators must be paid from tax-derived revenues. Statistics gathered generally are such as the Bureau of Mines already has, and publishes monthly. This duplication of course is rank extravagance with the people's money.

The oil industry, it is claimed, has nothing to hide, and so long as the taxpayer is willing to have his money wasted on futile investigations, just so long will they continue.

The gasoline shortage of 1920 was in large degree caused by political interference and procrastination, it is claimed; if the oil industry had been permitted to follow the logical course demanded by the development of the automobile industry, and if thousands of acres of developed and prospective oil land had not been "withdrawn from mineral entry, temporarily"—for 12 years!—there would not have been a shortage.

Who's "Crazy with the Heat"?

RECENTLY the sales manager of a motor truck company, in Detroit, said to F. Ed. Spooner, Motor West's advertising manager, who makes that city his headquarters: "Whatdy ya mean—here's Motor West of July 15, says motor truck registrations in California the first half of this year exceeded the 1921 period more than 50 per cent. You folks are crazy with the heat! It isn't so. All our reports from the Coast say so."

It required direct assurance from the office of Motor West office in Los Angeles, which never—well, hardly ever—has undue heat, to convince him. Then he immediately saw the advisability of seeking some of the business through advertising.

The July 15 issue of Motor West not only printed figures, but the news that an official of an Indianapolis company making motor cars had to come all the way to the Coast to learn—and be surprised by—the fact that registration of passenger cars in California, the first half of 1922, beat the same period of last year by 44.7 per cent.

In the vernacular, How do they get that way? Desiring business, why don't they systematically get the data direct, if they won't believe it when they see it in "the motoring authority of the Pacific Coast?"

It's psychological. In a poor huckleberry season a boy went to a swamp and by hard hunting got a pailful. Other boys then asked him if there were more. He said no. They went anyway, but they didn't hunt. They saw what he wanted them to see—that is, no berries.

Actual figures show there are plenty of "berries" in California; in the whole Pacific region, in fact; but it still is the fashion to say "No business." Those who persevere get the berries. Those who don't, get left.

Remove Those "Gates of Death!"

MANY towns erect "Welcome" arches or gates, but Burlingame, on the Peninsula, south of San Francisco, has gates that are called Gates of Death. California State Automobile Association has asked the supervisors to remove from the paved part of the highway the only one of these gates they can control, it being on public property. This one alone not only has caused many serious accidents, but actually has caused a number of lives to be lost, and sent deep sorrow into many other lives.

It is announced the supervisors refuse to move the gate, and that their reason is that "nearly" all who have been killed were drunk.

"Nearly" all! What if **every one** had been drinking? What if all had been **sober?** How does **any** mental condition of those whose lives are smashed out justify continuing a murderous outrage against humanity? If the dead were alive, would they do it? Would their fellow citizens let them? Would it be excusable if the victims were dope fiends, lunatics, or extraordinary county supervisors?

Realize the situation! Injury and death dealt to human beings generally, because **some** of them get drunk. It is a tragic travesty on civilization. It is symbolized by a gate instead of a Bastille. Surely there is some legal power vested in the public by which that gate, if not the "servants of the people" who are upholding it, can be removed summarily.

Hotel Price Aids Bungalow Truck

TRAVELING bungalows on truck chassis are increasing. Even wealthy men are taking up this idea and, with unlimited funds, are creating real homes on wheels. In Detroit, recently, one outfit drew so much attention it was placed on view at General Motors Building. The chassis was a GMC, and the body contained every home convenience, arranged in a manner not seen before. Compactness and convenience were at every turn.

As time goes on and as hotel keepers continue to keep their prices up, naturally this class of vehicle and tourist campers will increase. The hotel men are driving tourists to the roadways—much to the delight, in the end, of the tourist, and much to the dismay of the railroad men and the bonifaces.

Two hoboes met. One had been a salesman, hours 10 a. m. to 4 p. m. The other didn't have any money either.—A. E. A. Leader.

Right to "Speed Wagon" Name

Reo Motor Car Co., Lansing, Mich., writes asking that it be given co-operation in protecting its trademark right to the term Speed Wagon. The letter follows:

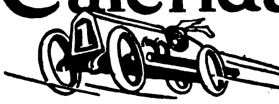
"Our attention occasionally is called to the misuse of the term Speed Wagon in advertising and reading matter, and it occurs to us that possibly publishers, advertisers, manufacturers, dealers, writers and others are unaware that this term designates a specific make of motor vehicle—that there is but one Speed Wagon and that is Reo.

"Speed Wagon is a trademark which Reo Motor Car Co. coined and copyrighted, and there can be no other make of Speed Wagon, and the term cannot be used by others.

"Our idea in writing you is in hopes that you will give us your co-operation in protecting this trademark."

For every two men who give instructons, 98 men follow them, according to statistics. A world need is more men trained to lead.—Charles M. Schwab.

Calendar of Coming Events



Aug. 26-Sept. 1—National Automobile Show, Toronto, Ont., In Connection with Canadian National Exhibition.

Aug. 29—National Safety Congress, Detroit.

Sept. 2-10—Automobile Show as part of State Fair, Sacramento.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

Sept. 4-9—Spokane's Annual Automobile Show, in connection with Spokane Interstate Fair. B. J. Garnet, Manager.

Sept. 6—Labor Day Race, Uniontown, Pa.

Sept. 7-Nov. 15—Automobile Exhibit, Rio de Janeiro, in connection with Brazil's Centenary Exposition.

Sept. 9-16—Automobile and County Industrial Show, Modesto, Calif., under auspices of Stanislaus County Auto Tradesmen's Assn.

Sept. 13-15—Sixth Annual Fall Convention, Motor and Accessory Manufacturers Assn., Hotel Lafayette, Buffalo.

Sept. 15-20—Annual Show at The Hague, Netherlands.

Sept. 16—Opening of New Track at Kansas City.

Sept. 25-Oct. 3—Automobile Show, Kaiserdamm Hall, Berlin, Auspices German Automobile Mfrs. Assn.

Sept. 27-30—Automobile and Accessory Exhibits, Orange County Fair, Santa Ana, Calif.

Sept. 30—150 Mile Race, Fresno, Calif.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Oct. 18-20—Convention of National Assn. of Farm Equipment Mfrs., Chicago.

Oct. 26-27—National meeting of Society of Automotive Engineers, Detroit.

November—Tent Show by Motor Car Dealers' Assn. of Los Angeles.

Nov. 3-11—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 13-18—Automotive Equipment Assn. Annual Show, Chicago.

Nov. 30 (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

Jan. 6-13—National Show, Grand Central Palace, New York.

Jan. 6-13—Automobile Salon, Hotel Commodore, New York.

Jan. 8-13—Second National Show, Automobile Body Builders' Assn., 12th Reg. Armory, 62d St. West of Broadway, New York.

Jan. 27-Feb. 3—National Show, Coliseum and First Regiment Armory, Chicago.

Jan. 27-Feb. 3—Automobile Salon, Chicago.

Stephens Is Reorganized

New Company's Officers All Long with Well Known Car, Which Will Be Made in Seven Models

COMPLETION of incorporation and reorganization, and its new officers, are announced by Stephens Motor Car Co., Inc., of Moline and Freeport, Ill. It succeeds Stephens Motor Works of Moline Plow Co. All executives have been associated with the development of the Stephens production and sales organization from the beginning of the enterprise. The Stephens business in all its phases is now established as a separate and individual company, a subsidiary of Moline Plow Co., Inc.

The officials of the Stephens organization are: G. N. Peek, president; H. S. Johnson, vice president and general counsel; R. W. Lea, executive vice president; H. J. Leonard, vice president in charge of production; O. P. Robb, vice president in charge of sales; L. C. Shonts, secretary; James Mullen, assistant secretary; F. J. Hoenigmann, assistant treasurer; Preston Boyd, assistant treasurer; J. L. Hammerrich, assistant treasurer.

R. W. Lea, executive vice president and general manager, is in charge of Stephens operations both at Moline and Freeport. Mr. Lea's headquarters are at Moline, where the Stephens executive offices and sales department now are located. The factories are at Freeport.

Among the directors of the new Stephens Co. who represent the Stephens and Moline Plow interests, are representatives of some of the largest and strongest commercial banks of the country. To an unusual degree they represent actual ownership of the company. The directors are: G. N. Peek, president Moline Plow Co.; H. S. Johnson, vice president Moline Plow Co.; R. W. Lea, vice president Moline Plow Co.; F. O. Wetmore, president First. National Bank, Chicago; Herman Waldeck, vice president Continental & Commercial National Bank, Chicago; C. P. Coffin, credit manager Illinois Steel Co., Chicago; C. T. Jaffray, president First National Bank, Minneapolis; S. A. Mitchell, vice president Mercantile Trust Co., St. Louis.

The Stephens lines now include seven models—four open and three enclosed body types—ranging in price from $1575 to $2550.

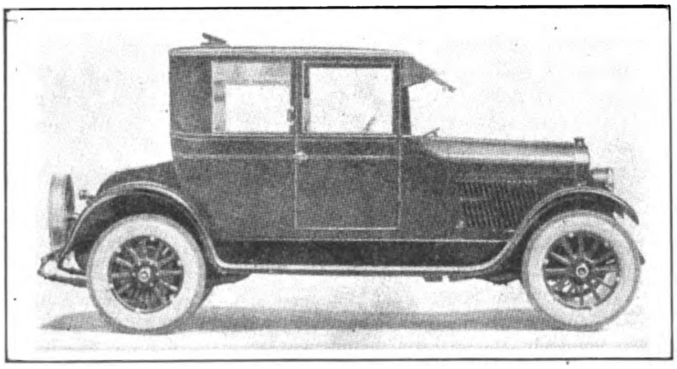
Latest Lexington a Coupe

The newest member of the Lexington series 22 closed car line announced by Lexington Motor Co., Connersville, Ind., is a coupe of striking lines, dignified without being severe, and a car the all-round utility of which has been developed to a high degree. At its price of $2345, President Frank B. Ansted declares no greater closed car value has ever been offered.

Equipped with the Ansted engine, the car is assured of power to spare. Its appeal is to women drivers as well as to men, because of its ease of handling and the comfort, even luxury, of its appointments.

The primary claim is its utility. Under the rear deck is sufficient storage space for any need. The physician especially will welcome this commodious locker, which is secured by a watertight lid with substantial lock.

For shopping trips, the new car also is ideal for women. Back of the driver's seat is a large locker for parcels. Silk roller curtains give seclusion. Not a single detail is said to have been overlooked.



NEWEST CLOSED LEXINGTON, THE COUPE, LISTED AT $2345.

A New Flock of Lower Prices

More price reductions, on or about August 1. Mr. MacAuley, of Packard, calls them merely delayed ones and says no price cutting war need be expected.

Auburn touring car, formerly $1575, now is $1475. Other prices: sport, with extra equipment, $1995; 7 passenger touring with 4½ tires, $1545; sedan, $2345.

Buick prices on the 14 new models range from $865 to $2195, compared with the former $895 to $2375, on 11 models. Reason—volume production, set at 185,000 for the year.

Chalmers reductions range from $210 to $400. This means a Chalmers Six, 5 passenger touring or roadster, for $1185; 7 passenger touring, $1345; coupe, $1595.

Chandler reductions, on nine models, range from $20 on the sedan (now $2375) to $300 on the coupe (now $1995), with reductions on seven other models.

Chevrolet reductions range from $15 on the Superior roadster ("Superior" now stands for the "490" line), from $525 to $510, to $50 on the F. B. coupe, from $1575 to $1325. There are new prices on the other Superior and F. B. models, also on the model G line, model T and commercial chassis. No reduction on the Superior touring car.

Cleveland prices, August 2: Roadster, $1085; touring, $1095; the new Chesterfield, $1260; coupe, $1495; sedan, $1585. Previously the touring was $1195, sedan $1595.

Dort—Reductions, $25 to $100. New prices: Roadster, $1070; 5 passenger touring, $1070; Yale coupe, $1250; Yale sedan, $1325; Harvard coupe, $1495; Harvard sedan, $1630, delivered on the Coast.

Haynes—$100 reduction on open 55s and $200 on the closed 55s. New prices: 55 touring, $1495; 55 roadster, $1545; 55 coupelet, $2095; 55 sedan, $2395.

Hupmobile reductions, $115 to $220, on 5 models; delivered on Coast.

Lexington prices on series 23 now are: 2 passenger roadster, $1695; 5 passenger touring, $1695; 7 passenger touring, $1795; 5 passenger sport, $2045; 5 passenger California top, $1995; 7 passenger California top, $2095; 5 passenger Royal Coach, $2145; 4 passenger coupe, $2345; 5 passenger coupe with 2 taxi seats, $2345; 4 passenger brougham, $2645.

Nash—New Coast prices on entire line: Fours—roadster, $1115; touring, $1135; Cabriolet, $1415; Carriole, $1515; coupe, $1615; sedan, $1785. Sixes—roadster, $1435; 5 passenger touring, $1475; 7 passenger touring, $1645; sport, $1645; coupe, $2175; sedan, $2495.

Reo—The company wires these prices: Phaeton, $1645; 7 passenger touring, $1485; 7 passenger sedan, $2435; 4 passenger coupe, $2355.

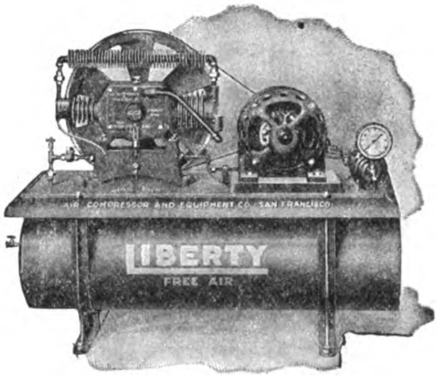
Oakland reductions are from $100 to $240 on its six models. The touring, $995, is down $150; sedan, $1545, and 4 passenger coupe, $1445, are down $240; corresponding drops on the others.

Oldsmobile reductions range from $40 to $165—Coast prices. New prices range from $1315 to $2395, on 13 models, and on truck chassis and two truck models.

Studebaker reductions range $70 to $200 on the light sixes, $180 to $300 on the special sixes, $140 to $225 on the big sixes.

Stutz--Reductions $200 to $500. See late news in this issue, as to expansion plans backed by Schwab.

Signal truck prices, effective August 1, range from $1450 to $3900 on five models.



THE list of names at the right is only representative of the hundreds of satisfied users of LIBERTY AIR COMPRESSORS — firms who, by comparison, decided that this mechanical wonder was best suited to their needs.

Most of the LIBERTY users are Western Coast concerns who have shown their appreciation of Western determination and Western ability to manufacture a machine designed to withstand rugged, and consistent punishment at all times.

LIBERTY AIR COMPRESSORS are made for every need—made in every size—sold on liberal terms—and finished in a manner that actually makes it an attractive machine wherever placed!

Ask your nearest jobber for details of the LIBERTY AIR COMPRESSORS, or you can write direct to the office and factory in San Francisco for catalog of all models and prices.

Air Compressor and Equipment Co.

46-50 NATOMA STREET, SAN FRANCISCO, CALIF.
504 SO. SAN PEDRO STREET, LOS ANGELES, CALIF.
1433 CARROLL AVENUE, CHICAGO, ILL.

Read This List of Satisfied Liberty Users:

Associated Supply Co., Port Barre, Calif.
Associated Oil Co., All Service Stations.
American Concrete Co., San Francisco, Calif.
Berger & Carter, San Francisco, Calif.
Berry & Hale, Los Angeles, Calif.
Bay Cities Tire Co., Oakland, Calif.
Budd Wheel Co., San Francisco, Calif.
Coast Tire Sales Co., Los Angeles, Calif.
Casper Supply Co., Casper, Wyoming.
Beauty Auto Shop, Huntington, Calif.
Eastern Utah Electric Co., Price, Utah.
Enterprise Service Station, Enterprise, Oregon.
Alfred Ings, Wellington, New Zealand.
L. R. Irish, Pasadena, Calif.
Harry G. Moe, Dayton, Utah.
W. E. McKee, Pasco, Wash.
M. J. Mickle, San Bernardino, Calif.
Motor Hardware & Equipment Co., San Diego, Calif.
Miller Auto Supply Co., San Diego, Calif.
Northern Garage, Helper, Utah.
L. Paul & Alfred Brown, Spokane, Wash.
M. H. Pepper, Yakima, Wash.
Perry Motor Co., El Paso, Texas.
Surplice Bros., Naches, Wash.
E. B. Sutton, Glendale, Calif.
Shantung Trading Co., San Francisco, Calif.
Standard Oil Co., San Francisco, Calif.
John F. St. Claire, Culver City, Calif.
J. T. Van Why, Santa Ana, Calif.
United States Naval Hospital, San Diego, Calif.
Union Oil Co., Riverdale, Calif.
Union Oil Co., Portland, Ore.
Union Oil Co., Phoenix, Arizona.
U. S. Metal Products Co., San Francisco, Calif.
Weinstock Nichols Co., San Francisco, Calif.
R. C. Zethraeus, Dallas, Texas.
Zellerbach Paper Co., San Francisco, Calif.
Union Oil Co., Reno, Nevada.
Ben F. Ware, Reno, Nevada.

—And hundreds of others.

valve mechanism is simple, with a minimum of
nd notable accessibility. A silent chain drives the
and lighting generator.
ight of model 6Y, without accessories, is 470

Control Passes to Schwab

August 9, was that Charles M. Schwab,
ard of Bethlehem Steel Corp., and
, formerly president of Chase Na-
rk, and associates have obtained
Car Co. of America by buying
of New York the 134,414 1/3
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on its demand on August 2.
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NDS.

General Motors Researchers

Plant 1000 Feet Long On 35 Acre Site Used By 300 Engineers to Study Fuel and Other Problems

WITH dividend checks sent out recently by General Motors Corp., stockholders received a small book dealing with General Motors Research Corp. and its contribution to the products of General Motors Corp. Pierre S. du Pont, president of General Motors, wrote a brief foreword.

General Motors Research Corp. was organized in 1920, consolidated several interests of General Motors which for some years had been conducting research work. The organization's plant is 1000 feet long and has the equivalent of more than 6 acres of floor space under one roof. Its site area is 35 acres, in the open country, 6 miles from Dayton, O. There, with unsurpassed laboratory facilities, the corporation supplements the work conducted by engineering departments of the General Motors divisions. Besides checking the individual developments at the divisions, the research organization makes independent and important researches and studies of problems of the automotive industry.

At the head of the organization is Charles F. Kettering, a research engineer of international reputation. He has 25 research engineers under his direction, heading the major sections of the research corporation. In all, there are about 300 engineers engaged in the work; these men are either graduates of the leading universities in this country or abroad, or are men of long technical and practical experience.

Important researches are being made by the fuel section, which has developed a compound that eliminates the "knock"—technically "detonation"—familiar to drivers uphill on "high." In high-compression engines, using commercial gasoline of present-day standards, this detonation becomes constant, and dangerously violent. The compound developed by General Motors Research Corp., when marketed, will permit the use of commercial grade gasoline in high-compression engines. This will mean that small, high-compression engines can be built which will develop power equal to present larger, heavier, relatively inefficient engines. Certain problems incidental to the manufacture of this anti-knock substance in commercial quantities are still to be solved, before it can be made available to the public.

One of the many laboratories of the Research Corp. is a large garage, where the work consists in testing automobiles to destruction. They are taken out on an 86 mile circuit of varying roads, and are driven until they break down under the grind. The drivers and mechanics work continuously in 8 shifts, and the cars usually are driven at the rate of 25,000 miles in three months. Then they are taken down, and complete measurements are taken to record the wear.

Mr. Kettering's work is of the highest interest to the automobile industry, since it utilizes resources and organization beyond the reach of the individual manufacturer. Since its beginning, the Research Corp. has made innumerable contributions to the advance of the industry. These have been placed at the disposal of General Motors divisions.

General Motors' Net Earnings Jump

An estimate of the earnings of General Motors Corp. for the first half of 1922, issued to stockholders, shows marked improvement over the first half of 1921. The report also showed net earnings in the second quarter of 1922 were $25,970,000, contrasted with $9,146,481 for the first three months.

For the six months period the surplus, after dividend payments on the preferred and debenture stocks, was $26,839,391, equivalent to $1.30 a share on the 20,550,590 shares of common outstanding, compared with only 31 cents a share earned in the similar period of 1921. Net sales for the half year totaled $218,490,887, of which $80,590,887 accrued in the first quarter and $137,800,000 in the second quarter.

Pierre S. du Pont, president, in his statement, said that during the six months approximately $6,200,000 net was added to reserves for depreciation of real estate, plants and equipment, the balance now standing at $43,700,000. All bank loans were paid off by June 30, and except for approximately $5,400,000 of purchase money obligations there is no indebtedness underlying the preferred and debenture stocks except ordinary accounts payable for merchandise, pay rolls, taxes, etc. Cash in banks at the end of the half year was about $35,000,000. Net working capital as of June 30, 1922, was approximately $123,000,000, an increase of $26,000,000 from December 31, 1921. Inventories, which on December 31 were written down to cost or market, whichever was lower, are well balanced, and during the six months have been reduced to below $98,000,000.

La Fayette to Go to Milwaukee

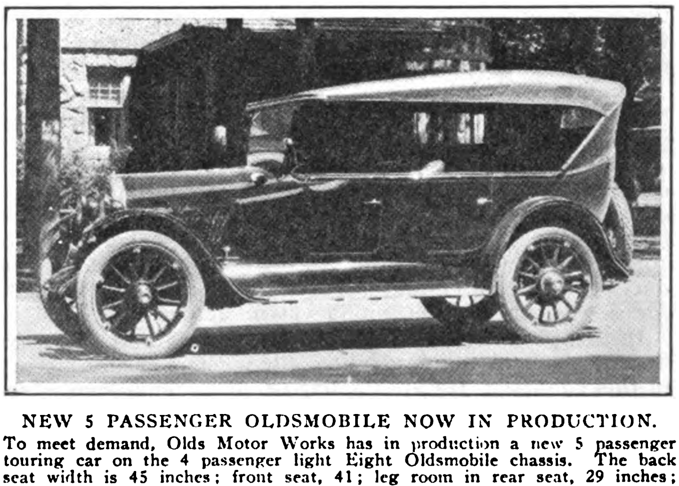
La Fayette Motors Corp. will move from Indianapolis to Milwaukee late this year, with tripled capacity, it is announced by Charles W. Nash, president, who also heads Nash Motors. The change will give La Fayette the benefit of closer contact with the Nash group of industries in Kenosha and Milwaukee, of which it is a unit financially. A plant for it will be erected immediately on land acquired adjacent to the Milwaukee Nash factory.

Mr. Nash say La Fayette has been short of space in its present plant at Mars Hill, Indianapolis. In the new location, near the Chicago and Northwestern Railway, its operating integrity and management will continue.

Production began at Indianapolis 2½ years ago, almost simultaneously with the business depression. Since then about 1200 cars have been delivered; and lack of space is stated to have limited sales possibilities during the periods of greatest activity.

Two months ago, after negotiations for merging with Pierce-Arrow ceased, La Fayette was reorganized, with $2,000,000 additional working capital. By the reorganization financial control went to the Nash industries.

Tentative negotiations for sale of the property at Mars Hill, Indianapolis industrial suburb, are rumored. Since La Fayette began there, industrial activity in the district has increased markedly. A colony of small homes has been commended by industrial and building publications as a model development.

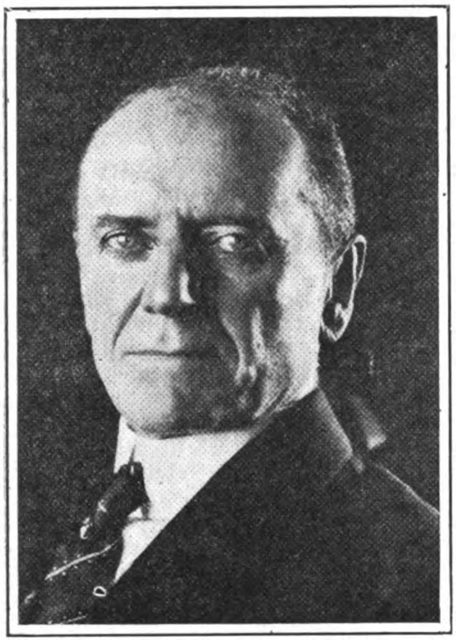


NEW 5 PASSENGER OLDSMOBILE NOW IN PRODUCTION.
To meet demand, Olds Motor Works has in production a new 5 passenger touring car on the 4 passenger light Eight Oldsmobile chassis. The back seat width is 45 inches; front seat, 41; leg room in rear seat, 29 inches; from back of front seat to steering pedals, 37 inches. Wheelbase, 115 inches. The top is a new clear vision type, to give rear seat passengers their full share of the view. The body is a rich wine color, and the hand-buffed leather upholstery the color of autumn leaves. The side rails are Circassian walnut. Instrument board, horn button, 18 inch steering wheel and spokes, and gear shift lever top, also are walnut. Price is $1595 Lansing.

The Kind of Man Ohmer Is

Associated Industries Head Believes in Production and Making Workers' Lives More Livable

WILL I. OHMER of Dayton, O., placed at the head of Associated Motor Industries, the newly formed $80,000,000 automobile merger, is founder and owner of one of the largest plants in America making ignition systems for automobiles. In Associated Motor Industries he plans to carry standardization and large quantity production to the farthest point ever reached in quality cars. The merging of 14 manufacturing and assembling plants in seven states will give the corporation the opportunity to apply standardization principles on the largest scale.



WILL I. OHMER.
Chairman of the Board of the Recently Formed Associated Motor Industries.

Mr. Ohmer is not only a leading production expert, but is well known as a humanitarian and for his advanced ideas in dealing with labor. His personality will be of interest to all wage earners. In the first announcement of the plans of Associated Motor Industries, he made a positive declaration against a policy of wage reduction. He declares workers must have the opportunity to earn more money instead of less. Efficient methods of manufacture will enable them to do this, he asserts. Improvement of all conditions surrounding employment has always been Mr. Ohmer's first thought. He believes high production can only be attained by getting the full co-operation of the worker, and that that is given when he is happy in his surrouundings and given the opportunity to be prosperous.

Mr. Ohmer was born and educated in Dayton, and there built up his present large plant, starting by manufacturing precision apparatus of his own invention. The capacity employment of the plant exceeds 6000 workers. It is devoted to making the ignition systems, mechanical and electric apparatus for Associated Motor Industries, and includes the scientific research and testing plants of the corporation. Owing to the size of the plant a large production of ignition and other equipment will be made for sale to outside automobile manufacturers.

In this plant Mr. Ohmer founded what is said to be the first mechanical training school for women in any factory in this country. He always has been an aggressive advocate of equal pay to women for equal work. The woman in industry finds one of her best friends in Mr. Ohmer. He recognizes the changing conditions that are bringing women into industrial life, and feels the responsibility that rests on manufacturers to make that life wholesome and right for the women who are forced by modern conditions to take their stations at the machine. The club rooms and rest rooms, lunch rooms and other employes' accommodations in his huge plant at Dayton are among the finest ever put into a manufacturing concern.

In addition to being director of a number of enterprises in this country, Mr. Ohmer has connections abroad which have developed from the frequent visits he has made to Europe and the Near East. In every trip he makes, he declares, he learns something useful to American business and to the American worker. He was one of the Government's right hand men during the war, making time fuses, fire control instruments loaned to our Government by the British admiralty, and other apparatus not producible by any other manufacturer in America. For several years Mr. Ohmer owned and published the Dayton Journal, developing it into an influential and prosperous newspaper.

Manufacturer, inventor and humanitarian, Mr. Ohmer enters upon his work with the record of never having failed in anything he has undertaken, from the creation of a new electric system to the filling of a twenty million dollar Government order. Prosperity, he declares, is here now, and will stay and grow greater, if everyone will go to work with a will. Associated Motor Industries is starting on a program of production at full speed, working toward 100 per cent standardization and concentration of output through centrally located assembling plants. Workers are to have the best conditions and the largest opportunity to earn ever planned by a national organization, it is declared. The automobile world will be watching with keenest interest the progress of the huge enterprise under the direction of this Dayton manufacturing leader.

A. E. A. Handbook Is Invaluable

Co-operation does wonders—the recently issued handbook of the Automotive Equipment Association proves it. This, and the association's universal catalogue, already described in Motor West, are being found indispensable.

The handbook, in a loose-leaf binder, has three sections. The first tells of the constitution and bylaws, functions of directors, state vice presidents and various committees; the fair trade practice code of 31 items; the modus operandi of the credit exchange; and lists the members.

The second tells what commercial standards, as to sizes and many other details, the association has adopted for a large number of products, stated alphabetically.

The third details engineering standards and practice formulated by the Society of Automotive Engineers. This also covers a large number of products. It includes a complete nomenclature—the recommended name or term for describing everything automotive, from car types to the smallest details.

Decision Protects Genuine Parts

Torbensen Axle Co., Cleveland, has won a permanent injunction restraining the United Gear Manufacturers Corp., New York City, from using the Torbensen name in selling parts for the Torbenson axle, when those parts are not made by the Torbensen Co.

According to R. C. Enos, vice president of Torbensen, this is a precedent which will enable unit manufacturers to bring into court any parties advertising or selling so-called pirate parts as the manufacturers' genuine replacement parts.

The larger manufacturers have established service stations which handle only genuine parts. This has assisted materially, but the recent decision, Mr. Enos believes, means eventual elimination of the wrong. He says it will enable salesmen to assure the car owner that the parts he buys are genuine, and duplicates of the parts they are to replace.

Questionnaire Draws Optimism

An optimistic view of automobiles sales prospects for the next six months has been received by Westinghouse Union Battery Co., of Swissvale, Pa., from more than 1800 of its distributors and service stations in America.

New Reo Is a Comfort Car

Five Passenger Phaeton Replete with Big and Little Features that Sweeten Motoring Life

THE little conveniences and big comforts essential to motoring, along with safeguards for emergencies, are designed into—not merely added to—the 5 passenger phaeton, a new model which has just been added to the Reo line.

Deep cushions, generously upholstered in curled hair and genuine Marshall springs, provide unsurpassed ease. The top is of new design, with gray interior trimming and finished with special nickel molding and leather insetrs. Clear-vision curtains, Reo-designed and made, pack flat in a special compartment behind the removable back cushion of the rear seat, without danger of bending or breaking the lights. A slip cover is supplied.

The coverings, in high grade gray Spanish leather, are splendid examples of fine custom upholstering. The leather, heavy and substantially trimmed, is exceedingly durable and retains its color and finish indefinitely. High grade carpet is fitted to both driver's and passengers' compartments.

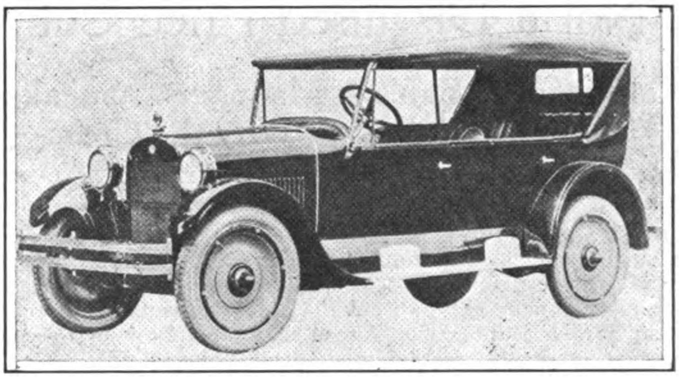
Three-bar full nickel bumpers, front and rear, are features, as are Boyce moto-meter, full nickeled; radiator cap of new design, made of German silver with ball handles; headlights, also new in design, with non-glare lenses and equipped with nickel bail; small parking lights to conserve the battery; also a combination parking light and combination stop signal on the rear.

Aluminum is used generously in the trimmings. Seven polished aluminum guard bars protect the rear seat back panel. Aluminum moulding, fitted at back of hood where it joins the cowl, prevents scratching of the body due to careless handling of the cover at filling stations. Step plates and kick plates of heavy solid aluminum save the running boards from wear and enhance the appearance of the car.

The radiator core is nickeled for appearance and protection.

Steel disc wheels, with tires inflating from the outside, four Royal Cord 32x4 tires and an extra rim, are standard equipment.

The windshield, a new Reo design with integral sidewings and nickeled frame, is good looking and insures better vision and more protection against rain or snow. It supplies, besides, a perpendicular support for the front door curtains when the doors are opened. The windshield cleaner is of solid brass, nickel finished. A cowl ventilator that cannot get out of order directs ample draft toward the floor-boards of the front compartment.



THE NEW 5 PASSENGER PHAETON ADDED TO REO LINE.

In the back of the front seat are two roomy curtained spaces for wraps and packages; and between these two compartments is a disappearing vanity case, well supplied. Near them is a tonneau light with concealed wire long enough to permit its use as an extension lamp in and around the car. An aluminum covered foot rail, nickel trimmed, is fitted in passengers' compartment. An electric lighter of fine quality, for cigars, is placed handily on the instrument board, also an 8 day keyless clock. The steering wheel is finished in American walnut, with arms also of walnut.

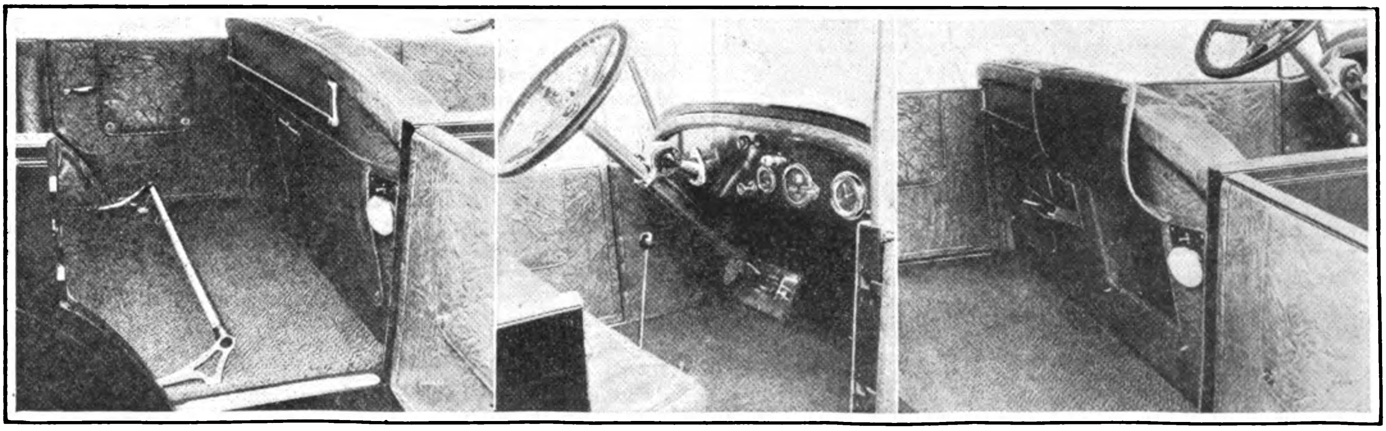
Reo royal blue is the standard color of the new model, with wheels in French gray, striped in deep blue. Hub caps are fitted with nickeled nameplate ring.

Bonds Based on Willys Corp. Plant

Durant Motor Co. of New Jersey, which recently acquired the plant of Willys Corp. at Elizabeth, N. J., is partly financing the purchase by an issue of $3,500,000 of 6½ per cent bonds. These have been purchased by S. W. Straus & Co., who will offer them at par and accrued interest. The term of the loan is from 1 to 12 years. The plant was built during the war. Total floor area is about 2,100,000 square feet or 49 acres, making it one of the largest automobile plants in the world. The property represents an investment of $13,106,294 and a replacement value of $10,636,900, and was acquired at receiver's sale for $5,525,000.

Big-Six Speedster Studebaker

A new and important addition to the Studebaker line is the Big-Six Speedster. Of 4 passenger capacity, this new model is not only snappy and aristocratic but is described as the last word in completeness of equipment. An upholstered arm rest is a feature of the rear seat design, to provide the ease and comfort of an overstuffed armchair. It has a number of other de luxe features. The new model is $1985.



INTERIOR OF NEW REO PHAETON. NOTE THE FINE FINISH; LAMP IN FRONT PART OF REAR COMPARTMENT, AND CONVENIENCE OF FITMENTS FOR THE MAN OR WOMAN BEHIND THE WHEEL.

Not a Disguised Price Cut

Goodyear Sales Manager Speaks "Werry Plain" as to Why the Cross-Rib Cord Is On Market

COMMENTING on the splendid and spontaneous reception by the motoring public and trade generally to the new Cross-Rib cord tire recently introduced by his company, L. C. Rockhill, sales manager of Goodyear Tire & Rubber Co., Akron, has the following to say in clarification of certain misunderstandings said to have arisen.

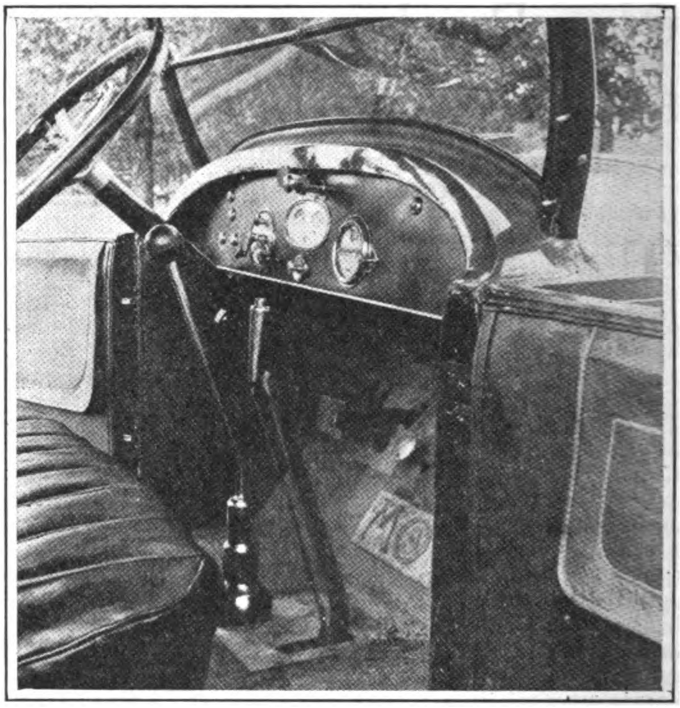
"There is nothing particularly startling in our company having placed this new line on the market. In the clothing market there are suits which sell for $75, some for $50 and others for $25. A similar classification can be made in the tire business.

"When long wear, low cost per mile, high traction and the maximum of nonskid quality are desired, we recommend the All-Weather Tread, which always has represented the highest quality tire we know how to manufacture. On the strength of these qualities Goodyear has built up the largest automobile tire business in the world. But there are many people who cannot or will not pay the necessary price. Heretofore these people have been supplied by manufacturers who arrive at lower prices by the route of long dealer-discounts, instead of a lower list. The dealer has thus been able to quote discounts to consumers when necessary, and in many cases selling tires became simply a business of bargaining as far as the consumer was concerned. We cannot believe a prevalence of this condition is healthy for the tire market. It is opposed to the best interests of dealer and consumer alike.

"Our factory facilities have expanded, allowing us to make additional product to compete with the so-called long discount tires. We formerly had been unable to do so because for many years we were oversold on All-Weathers. So we started the development of a supplementary line to meet the needs of these consumers who could not pay the price of the All-Weather, and when we were satisfied with our experiments and tests we placed it on the market.

"There is nothing startling about it. Most manufacturers have more than one line—sometimes called by different names—the object being to reach different markets.

"What effect the introduction of the Goodyear Cross-Rib cord tire will have on the fabric tire market we are unable to say. Of course the increasing use of cord tires in general will gradually diminish the fabric tire makret.

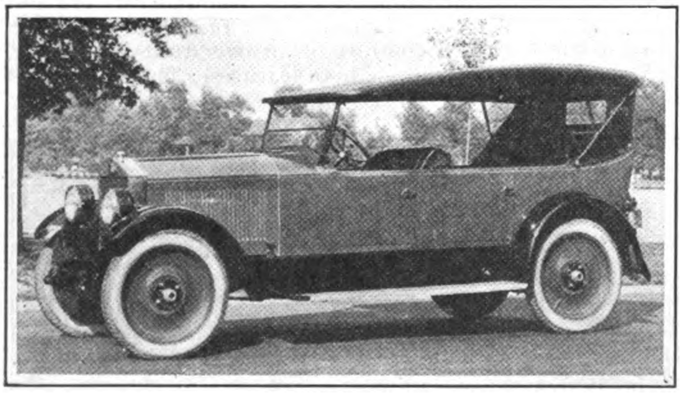


A LOOK THROUGH THE FRONT DOOR OF THE NEW MOON.

"We did not introduce lower price cord tires on the market. They have been here in scores of brands for a long time. Nor does the introduction of our new line have anything to do with the guarantee proposition. More headway has been made in eliminatinng unfair adjustments since the advent of lower price cord tires than at any previous time in the history of the business.

"We have had two tires in our fabric clincher line for years—the All-Weather at a higher price and the Cross-Rib to meet the lower priced market. We are following the same practice now in the cord tire field.

"To put it in a nutshell, we simply have recognized the obvious. As in every other market, there are consumer stratifications, and we are meeting a very evident public demand by the introduction of this new line. Its highly gratifying dealer and consumer acceptance is proof positive that we have analyzed the situation correctly, and its best justification."



NEW MOON, THE SIX-58, A 7 PASSENGER MASTERPIECE.

"Our masterpiece," Moon Motor Car Co., St. Louis, calls its new car, the Six-58 for 7 passengers; built also with 5 passenger body. A de luxe 3100 pound car at $1785 St. Louis. It has a 3⅝x4½ Red Seal Moon-Continental motor, 6 cylinders en bloc, and other high quality chassis units. Chassis is swung low. Wheelbase, 128 inches. Tires, 4½ cords. The newly designed body has many new Moon features. It is of silver-finished steel over a superstructure of hardwoods. The wide, roomy seats are upholstered with tan, handbuffed genuine Spanish leather. On the ebony finished instrument board, satin-silvered instruments are grouped to report every function at a glance. All in all, it is termed the supreme achievement of 50 years of fine coach work experience.

Eastern Clubs in Membership Race

Four Eastern automobile clubs are running a race for more members, though each is in a different city. They are Automobile Club of New York City, which now has 27,000; Keystone Automobile Club, of Philadelphia; Maryland State Automobile Club, of Baltimore; and Cleveland Automobile Club, which now has 26,000. All but the Baltimore club are members of the new National Motorists' Association, and H. N. Lucius, secretary of the Baltimore club, which is not an N. M. A. member, is treasurer of the N. M. A.

There are two contests, one between New York and Cleveland, the other between Philadelphia and Baltimore. As to the two latter, the officer of the club showing the most gains at the end of the first month is to be given a dinner by the recruiting and "eating" officer of the losing club.

Acting Chairman of Contest Board

F. A. Croselmire, vice chairman of the A. A. A. contest board, which has charge of all A. A. A.-sanctioned races, now is acting chairman, as William Schimpf, the chairman, is in ill health and is now in the Adirondacks.

Chesterfield, New Cleveland

Latest Addition to the Famous Line of Sixes Is a De Luxe Product at Only $1295 Factory

THE new Chesterfield, snappy, up-to-the-minute in style, dash and vigor, latest creation of Cleveland Automobile Co., Cleveland, O., bids fair to be one of the most popular models of the Cleveland Six line. It was created in answer to the insistent demand of the public for newness in style and distinction.

Low hung, suggestive of speed and the open road, finished in a rich biege brown, with a graceful khaki top, and upholstered in beautiful Spanish leather to match, this model is one that appeals to lovers of beauty and attractiveness in motor cars. Aluminum trunk guards grace the rear of the body, and a durable rack of the same metal, behind which is mounted an extra wheel, lends a rakish touch to the rear appearance of the car. A specially selected nickel spring bumper on the front; plate glass auxiliary windshields, mounted by nickel trimmings; cowl ventilator; a beveled edge rear vision mirror; windshield wiper; and a complete set of five wire wheels, comprise the standard equipment.

Like the other open models of the Cleveland Six, the new Chesterfield is unusually roomy in both front and rear compartments.

This new car is being offered to the public at $1295 f. o. b. factory. "Every facility of the big Cleveland plant," Cleveland officials state, "together with every power within the ingenuity of the engineers, has been devoted toward making the new Chesterfield a leader in its class."

Transit Body Praises Pyrene

"For political purposes only," was the newspaper editorial and news term applied in New York to Mayor Hylan's charge that "poisonous" fumes from fire extinguishers made by Pyrene Mfg. Co., Newark, N. J., had to do with the suffering of those who were imprisoned in a New York subway by the electrical fire on July 6. This has been told in Motor West. It also was told that Pyrene had been used in the subways 10 years.

Now come excerpts from a report in the matter made July 24 by the Transit Commission, which in its investigation used experts, including some from the U. S. Bureau of Mines. Tests of samples taken from the train involved in the matter showed they were "free from deleterious ingredients often accompanying carbon tetrachloride," which is a standard fire extinguisher, in general use and approved by the National Board of Fire Underwriters. It is particularly adapted to fires caused by short circuits, such as the one in this case, because it is a nonconductor of current and when properly applied, in sufficient quantity and steadily, will extinguish electric arcs. Conditions for forming phosgene (gas) in appreciable quantity were absent in this accident; and were present to only a slight degree for forming chlorine. The carbon tetrachloride and chlorine vapors that may have been formed, said the Bureau of Mines report, contributed but little to the discomfort, which was due mainly to smoke.

Good Stuff for Walkers to Read

Pedestrians along country roads, and those who walk in the streets at night in preference to using the sidewalks, can contribute much toward the reduction of automobile accidents by walking on the left side of the road, facing oncoming traffic, according to Dai H. Lewis, acting executive chairman of the American Automobile Association, who says:

"Courtesy on the part of the automobile driver demands the use of dimmed lights at night. This increases the safety of passing motorists, but it is hard to see a pedestrian walking along the edge of the road in the same direction the car is traveling. This difficulty is increased if the person afoot is wearing dark clothing. The result is that the driver is practically on top of the pedestrian before the latter becomes visible.

"Walking on the left hand side of the road is just as good for the pedestrian, and enables him to see the approaching car in time to step aside if the motorist does not see him in time to swerve. The pedestrian should remember that the rules of the road require the motorist to keep to the right and that walkers should contribute to safety by keeping to the left, the side which best enables them to escape the oncoming car and especially the occasional speed fiend or 'flivverboob,' who cares nothing for consequences and speeds regardless of the rights of others; for it has been truly said that whether you are in the right or not does not matter after you are in the hands of the undertaker."

Rubber Business Sized Up

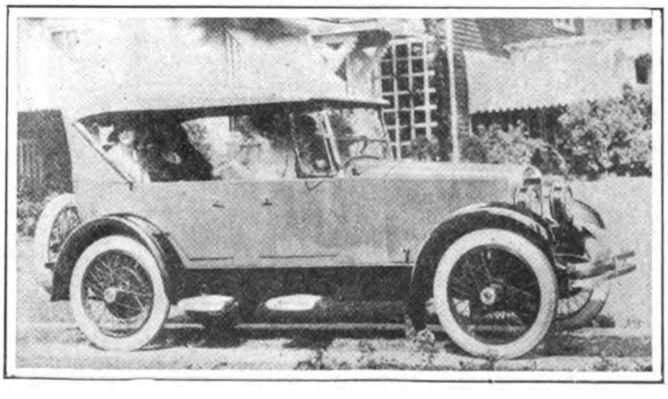
Although for many months export business in the rubber industry has been a losing proposition, it has now been established on a profitable basis and heavy orders are being turned out, is the Industrial Digest analysis of trade journal data. Owing to the frequent spurts and slumps in tire building, the tire manufacturers have stopped expanding finished goods inventories and are applying production direct to sales. The trade press thinks that the industry is determined never again to be caught as it was in 1920 with a huge supply of tires on hand. There is, however, a steady increase in the output of virtually all plants.

Sale of New Process Gear Plant

On August 22, at Syracuse, N. Y., there will be a receivers' sale of the New Process Gear Co. plant of Willys Corp. There are about 7 acres of land, and three manufacturing and one power plant containing about 8 acres of floor space, machinery and materials. The property will be sold as a going concern, the sale effective as of May 31, 1922, purchaser to have profits accruing since then, estimated at $110,000. There are notes and accounts receivable, book-valued at more than $430,000; Government bonds and cash, about $350,000; and other assets.

Only One-third Saturated, Says Ford

The Dow Jones financial publication in New York quotes Henry Ford as saying, as to the saturation point in number of automobiles: "The country is only about one-third saturated. There will be 30,000,000 automobiles in the United States some day, and there are only slightly more than 10,000,000 today. If our country grows to 150,-00,000 people there will be more than 30,000,000 automobiles. I look for the ratio to keep on going down until it hits about one in four or one in five inhabitants."



THE CHESTERFIELD, LATEST CLEVELAND SIX CREATION.

Called the "Car Complete"

New Mitchell 5 Passenger Phaeton at $1790 Has Every Practical High Grade Accessory Needed

THE most recent offering of Mitchell Motors Co., Inc., Racine, Wis., is a de luxe 5 passenger phaeton, embodying the latest features of automobile design and engineering. Characterized by its makers as the "car complete," the new phaeton model, priced $1790 f. o. b. factory, has every practical, high grade accessory necessiry and desirable by the average owner. In the equipment are such items as spare tire, tube and cover; de luxe moto-meter and nickeled radiator cap; windshield wings; sun visor; front and rear bumpers; step plates; rear view mirror; windshield wiper; motor-driven tire pump, and many other items. Curtains are carried in two compartments in the back of the front seat. Tools are in the left front door.

The new Mitchell has a 120 inch wheelbase. Its motor is the F-50 six, made famous through the operations of "White Streak" demonstrators. Steel disc wheels with demountable rims, and nickeled retaining rings, are standard equipment; tires are 32x4 cord.

The design is distinctive—streamline, blending curves from front to rear. It indicates sturdiness and luxury. This is borne out by the seating arrangement. Genuine leather upholstery over deep spiral springs assures comfort.

Of particular interest to the motor trade is the newly designed radiator shell and Mitchell emblem; the former follows elliptical lines and the well known scroll is displaced with a large "M," with the manufacturer's name beneath.

Standard colors are maroon and blue. The latter is illuminated with shadow line striping in white. Gold striping is used on the maroon bodies.

Production is under way and deliveries are being made.

Workless-Saturday Body Launched

Following close on Henry Ford's announcement that he had established the five-day working week in his factories, comes the news of the inauguration of the Saturday Ain't No Day to Work Association.

Members obligate themselves to spend Saturday touring, and to do no heavier work on Saturday than changing a tire. Member cars are designated by an attractive red-and-white circular steel emblem on the radiator. Every car owner is eligible for membership and there are no dues.

The accessory dealer or car dealer who first applies to Arthur Stringer, general manager, 1721 Prairie Ave., Chicago, is given the official headquarters for his town. With the appointment go full instructions telling how to organize and conduct the club.

"Saturday Ain't No Day to Work Association," said one manufacturer, "is the greatest merchandising idea of the year. A car on the road is worth a thousand in the garage. Already there are scores of dealers who are improving the accessory business of all manufacturers by getting behind the association."

Motor Cars and Morality

According to the late grand jury of Des Moines, Iowa, "automobile parties are responsible in a great measure for immorality among the young people." And has it come to pass that there is no safety in numbers? Aren't the young people of today just the same as the young people were when grandfather was a jazzer and grandmother a jazzabell? Has human nature ever changed? Didn't they have the hug-me-tight buggy when father was a boy and mother a girl? There is a lot of bunk going the rounds of the press, the rounds of some of the pupils, the rounds of some of the lecture platforms and the rounds of some of the grand jury rooms.—Arkansaw Thomas Cat.

Midwest Reorganization Completed

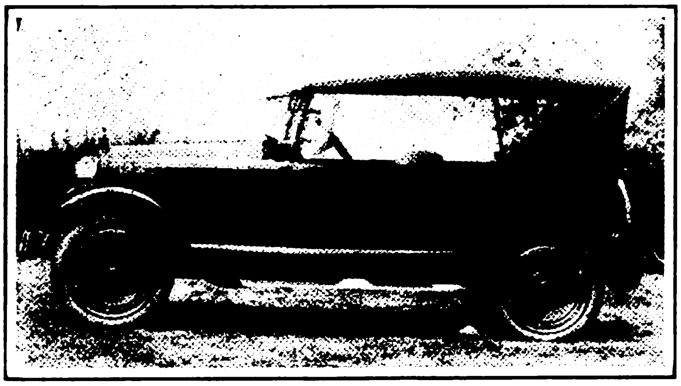
In last issue was told the success of Midwest Engine Corp. $1,000,000 bond issue, which was taken by holders of old Midwest Engine Co.'s preferred stock, who thus showed their faith in the reorganization. The judicial sale, necessary to complete transfer of assets of the new company, occurred July 12. With ample capital and equipment, and efficient organization at both the Indianapolis and Anderson plants, business is good. Recently orders approximated $2,000,000, from worthwhile concerns. Business has been on the upward trend several months. The next news will be of discharge of the receivers, and election of the new directors and officers.

Cameron's $400 Air Cooled Car

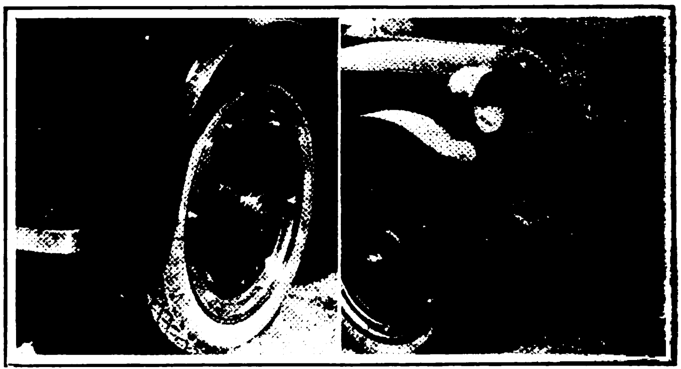
F. F. Cameron, a Cleveland automotive engineer, has designed an air cooled car weighing about 1000 pounds, to sell for about $400. A company is being formed. In the days of the Vanderbilt Cup race the Cameron air cooled car was a factor in races run on the road in connection with the Vanderbilt race. The Camerons entered the field in the earliest days, and cars of their design always have been cooled by air.

300 Mile Race for Kansas City

On September 16, Kansas City's new board track, being built by Jack Prince in a 60 day period, will be opened with a 300 mile race, the purse to be $30,000 and the profits to be used for disabled and needy war veterans. The race will be under the auspices of the American Legion.



MITCHELL F-50, DE LUXE 5 PASSENGER PHAETON.



FRONT AND REAR GLIMPSES OF THE NEW MITCHELL.

$995

Touring Car
at factory

New Prices
on the
New Oakland

New prices—*unusually low*—with unchanged high quality construction throughout the car, makes the Oakland dealer franchise uncommonly attractive.

The permanence of Oakland as a division of General Motors Corporation—the splendid reputation the New Oakland Six is establishing in the hands of many thousands of owners—its special, written, 15,000 mile performance guarantee and the attractive new selling agreement of the factory—all these things are making immediate profits and building sound businesses for Oakland dealers in all sections.

There are still a few desirable territories open—write the factory.

Oakland Motor Car Company, Pontiac, Mich.
Division of General Motors Corporation

New Prices at Factory

Roadster	*$ 975*	*2-Pass. Coupe*	*$1185*
Touring Car	*995*	*4-Pass. Coupe*	*1445*
Sport Car	*1165*	*Sedan*	*1545*

The New Oakland Six

IN FOREIGN FIELDS

Better Export Times Ahead

A message of cheer is addressed to discouraged exporters by M. H. Hoepli, of the Automotive Division of the Department of Commerce, in an article for an issue of United States Commerce Reports. The decrease in 1921 caused a general reduction of the staff handling foreign business, but the coming years will see a rebuilding of the export organization, along the line of small but most efficient personnel.

Although records established in 1920 were not equalled in 1921, the basic strength of the industry is reflected in the increase in both production and exports in 1921 if compared with 1913, as shown in the following table:

PASSENGER CARS.

	Exported	Produced	Per Cent Exported
1913	24,293	461,500	5.28
1914	28,306	543,679	5.21
1915	23,880	818,618	2.92
1916	56,234	1,493,617	3.75
1917	64,808	1,740,792	3.72
1918	52,312	926,388	5.65
1919	67,145	1,657,652	4.05
1920	142,508	1,883,158	7.56
1921	26,592	1,514,000	1.75

MOTOR TRUCKS.

	Exported	Produced	Per Cent Exported
1913	993	23,500	4.21
1914	784	25,375	3.10
1915	13,996	74,000	18.89
1916	21,265	90,000	23.70
1917	15,977	120,157	12.40
1918	12,200	227,250	5.38
1919	15,585	316,364	4.93
1920	29,136	322,039	9.02
1921	7,480	154,550	4.85

The production figures are those of National Automobile Chamber of Commerce.

In view of the considerable growth of the industry, says Mr. Hoepli, it is hardly surprising that in 1921 the ratio of production is slightly below the 1913 level in the case of passenger cars, and slightly above in the case of motor trucks.

A general analysis of the situation leads Mr. Hoepli to the following conclusions:

(a) Production of passenger cars is on a more stable basis than production of motor trucks, which may largely be accounted for by the fact that the wider distribution of passenger cars necessitates a larger distributing organization, which in turn is able to absorb a larger surplus.

(b) The excessive drop in exports of passenger cars and motor trucks in 1921 reflects the difficulties which the automotive manufacturer went through after he had built up a costly export organization in previous years. To avoid the recurrence of such a crisis, export operations in future will be on the basis of maximum economy. Export combines are well within the reach of possibility.

(c) Last year's ratio of exports to production is likely to have been the lowest for some time to come, especially as to passenger cars. In the long run, the sales resistance in this country is bound to increase, while in foreign countries the return to prosperity, coupled with the good roads movement and the need for cheap transportation, is bound to stimulate the demand for automotive products.

Registrations in Alexandria, Egypt

Seven hundred of the 1639 passenger cars in Alexandria, Egypt, in 1921 were American, the remainder being of French, Italian, and British make. About 6 of the 121 motor trucks were American and very few of the 390 motorcycles, most of them being British. Several companies were formed in 1921 to operate taxicabs, some using a small American car and the others using the Italian Fiat.

Our Prices Help Us in Africa

American cars sell cheaper than those of British make in South Africa, according to advices received by the automotive division of the Department of Commerce. South Africa's chief source of automotive products in 1913 was Great Britain, with a total of £460,797 compared to those from the United States totaling £389,057. In 1920 the United States supplied £2,952,985 worth of motors and spares, compared with £427,441 worth from Great Britain. The returns for 1921 are not yet complete, but the same proportion prevailed, although the quantities were much smaller. Taking the stated figures as a basis, the normal market is estimated as being capable of taking 600 cars per month in the future.

A comparative price table, eliminating Fords and the higher priced cars, with the prices of British makes estimated, shows that on the average American cars sell for from £275 to £140 cheaper than the corresponding British makes. The American dealers score heavily on propaganda as well as price, while the Britisher has done little if anything along that line. However, the British manufacturer does enjoy several advantages, namely: (1) A 3 per cent preferential tariff in South Africa; (2) a sentimental preference equal to at least 10 per cent; (3) an advantage in the balance of exchange amounting to about 10 or 12 per cent; (4) and lower freight rates, due to proximity of the market as compared with the United States.

Taxicabs Popular in Rome

The first regular taxicab service was established in Rome in May, 1921, says a recent report to the Department of Commerce from Commercial Attache H. C. MacLean. Prior to that, except street cars and a few touring cars for hire, the usual European one-horse cab was the only means of transportation. Now there are hundreds of taxis in use in Rome, principally Fiats, and a considerable number of Ceiranos and Diattos.

Although the use of motor taxis is sure to increase in the immediate future, it is not believed there is any demand for American cars for the purpose, owing to the high duty and unfavorable exchange.

Brisk Demand in Chihuahua District

Consul Stewart reported that the demand for passenger cars has continued comparatively brisk in the Chihuahua district, Mexico, in May and June. Not only was there a good demand for cheap and moderately priced cars, but a number of higher priced American cars have been sold. The call for new trucks has been very small, but used trucks have found a good market. This shows the need for commercial transportation, and as financial conditions improve, new trucks will be purchased.

Belgium's Luxury Tax on Motor Vehicles

Acting Commercial Attache S. H. Cross, Brussels, writes that a luxury tax in the form of a 5 per cent stamp tax on the retail price of all motor vehicles, except those used exclusively for professional or commercial purposes, recently has gone into effect in Belgium. Demonstration cars bought by dealers are subject to this tax. Accessories also are taxed, and repairs are taxed on the value of parts used.

Taxicab Company Started in Florence

A service of some 35 motor taxicabs has been installed in Florence, Italy, by veterans of the war under the name of the Associazione Reduci di Guerra, says Consul Dorsey. The cars are Italian, of the laudaulet type and operated by 4 cylinder monobloc 20 horse power engines. The association expects to put 15 additional cabs in service soon. The tariff is 1.50 lire for 300 meters or 9 minutes wait.

America Leads in Danish Imports

The United States supplied 5600 of the 7283 passenger cars and trucks imported into Denmark during 1921, according to information received at Washington.

Highway Matters

Linking Up the State Systems

A meeting of New England state highway officials and engineers of the Bureau of Public Roads not long ago, was an important point in the development of highways in this country. It was the first meeting ever held between officials empowered to act, for the purpose of laying out a system of highways to serve an area larger than a single state. It was the first of a series of similar meetings which will be held between the Federal officials and highway authorities of various groups of states, the object of which will be the solution of the problem mentioned, for the whole country.

This progressive step, long wished for by all users of the highways, can be attributed to the requirements of Federal aid legislation. It is required that all Federal aid be spent on a connected system designed to serve the needs of the whole country. Tentative systems have been submitted by all except eight states, and now the series of meetings is being held to connect and co-ordinate the proposed state systems.

The Bureau of Public Roads intends to push this work as rapidly as possible, so as to lay before the people the plans for what will be by far the greatest highway system in the world. At present only roads certain to be on the system are being approved for construction with Federal aid; in May more than 20 miles of completed road was added to the system on each working day. It is estimated that the system will comprise 180,000 miles of highway.

Highway Building Costs Less

A considerable lower level of prices for the various items entering into highway construction is reported by the U. S. Bureau of Public Roads. This conclusion is based on the following prices by successful bidders on Federal aid roads during April, averaged for the United States. Some of the figures cover a large volume of work, well distributed over the country, while others are based either on small volumes or scattering reports.

The figures which cover the cost in place are as follows: Earth excavation, common, 33 cents a cubic yard; rock excavation, $1.26 a cubic yard; gravel, $1.44 a cubic yard; sand-clay, 45 cents a cubic yard; crushed stone, $3.42 a cubic yard; structural concrete of various classes ranges from $14 to $21.20 a cubic yard. For surfacing, the following are the prices by the square yard: Gravel, 40 cents; surface-treated macadam, 50 cents; bituminous macadam, $1.06; bituminous concrete, $1.97; plain cement concrete, $2.17; reinforced cement concrete, $2.54; and brick, $3.70. Reinforcing steel has cost $0.053 a pound and structural steel $0.059 a pound. Cement has been supplied to contractors by the following states at the following prices per barrel: New York, $1.73; Wisconsin, $1.94; and Arkansas, $2.70.

From War Use to Highway Use

Surplus war material valued at $139,773,986 was delivered to the states for use in road construction up to July 1, reports the Bureau of Public Roads. It comprised all sorts of supplies and equipment suitable for road building, and for which the War Department had no further need. It was distributed on the same basis as monetary Federal aid.

In value of material received, Texas and New York led with nearly $8,000,000 worth, and every state with the exception of five of the smaller ones received supplies valued at over $1,000,000.

Probably of most value have been the 24,752 trucks, 4573 automobiles, and a large number of tractors.

There is still a large quantity of material in this country for distribution. This will be increased further by material used by the army of occupation in Germany. This arrived at Brooklyn, N. Y., July 1. It consisted of 30 trucks, 7 tractors, 4 concrete mixers, and 3 road rollers. Additional material from Germany will consist of several hundred trucks, a number of tractors, and about 2,000,000 pounds of spare parts for trucks.

Road Building Problems Studied

The committee on tests of the American Society of State Highway Officials met with the officials of the Bureau of Public Roads in Washington, June 26-27, to consider standardization of specifications and tests for road materials. The purpose of this meeting of representatives from all sections of the country was not so much to lay down rigid rules as to harmonize general practice. Standardization taking into account local conditions is being brought about by a series of meetings between officials from groups of states, and engineers of the bureau.

The present activity of highway officials along this line is most encouraging for road building. A few years ago the general tendency was toward individuality in each state, without much opportunity for exchange of ideas and knowledge. Today the tendency is in the other direction, and a better solution should be reached when the problems are discussed at meetings of the best highway engineering talent.

Should Allow for Future Traffic

In building a road, liberal allowance should be made for future increase in traffic. A traffic count by the Bureau of Public Roads, in co-operation with Tennessee officials, on a number of roads around Nashville shows surprising facts when compared with a similar count in 1916. During this period automobile registrations have doubled, but the number of motor vehicles actually on the road is five times as large as in 1916. In 1916 horse-drawn and motor vehicle traffic were almost equal in volume. In 1921 horse-drawn traffic had decreased only slightly in volume and constituted 16 per cent of the traffic, motor vehicles constituting 84 per cent.

Observations in this and other counties lead to the conclusion that volume of traffic may increase in much larger portion than the number of motor vehicles and also will depend to a large degree on the condition of the road and on the economic conditions in the territory.

MacDonald Urges Gasoline Tax

"Forty million dollars annually can be raised for road building and maintenance by a tax of 1 cent a gallon on gasoline," says Thomas H. MacDonald, chief of the Bureau of Public Roads, in urging a readjustment of sources of revenue so that a larger proportion would be paid by the road user and a lesser percentage from state or local taxes.

"This method," says MacDonald, "is growing in favor rapidly and has been adopted in Arizona, Arkansas, Colorado, Connecticut, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Montana, New Mexico, North Carolina, Oregon, Pennsylvania, South Carolina, South Dakota, and Washington. Of these states, only Oregon, New Mexico, Colorado, and Kentucky had such a tax prior to January 1, 1921. The tax in Maryland, Mississippi, and South Carolina has been adopted during 1922 and several other states are considering such a tax."

20 Miles of Federal Aid Roads Daily

Federal aid road projects totaling 663 miles were completed and 541 miles went under construction in May, bringing the total under construction to nearly 15,000 miles and the mileage in completed projects to 17,038, says the Bureau of Public Roads. These figures indicate that the Federal aid system grew at a rate of more than 20 miles per day on each working day of the month. Allotments of funds to definite projects amounted to $7,828,000 during the month.

The Car of Commerce

More On California Situation

NEVER before was the motor transport situation in California, markedly affecting conditions elsewhere, so fully set forth as in the August 1 issue of Motor West. The article attracted wide attention for that reason, and for others. It did much toward crystallizing activities to improve the situation, which is briefed again:

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There is entirely too much disposition—based on ignorance of facts, no matter what the various motives—good or bad—to overtax and over-regulate motor vehicles, particularly those which practically are in the public utility class; most particularly trucks. Among the 58 counties of California a chaos of regulations exists, especially as to weights. Also, notably by prejudiced propaganda from several sources impelled by selfishness and ill-informed rejection of general economic data, an unfriendly attitude toward the truck has been produced. Such facts as one demonstrated by the first and extensive highway test at Pittsburg, Calif., that heavy, relatively slow moving trucks damage roads less than do the faster light vehicles, are kept quiet.

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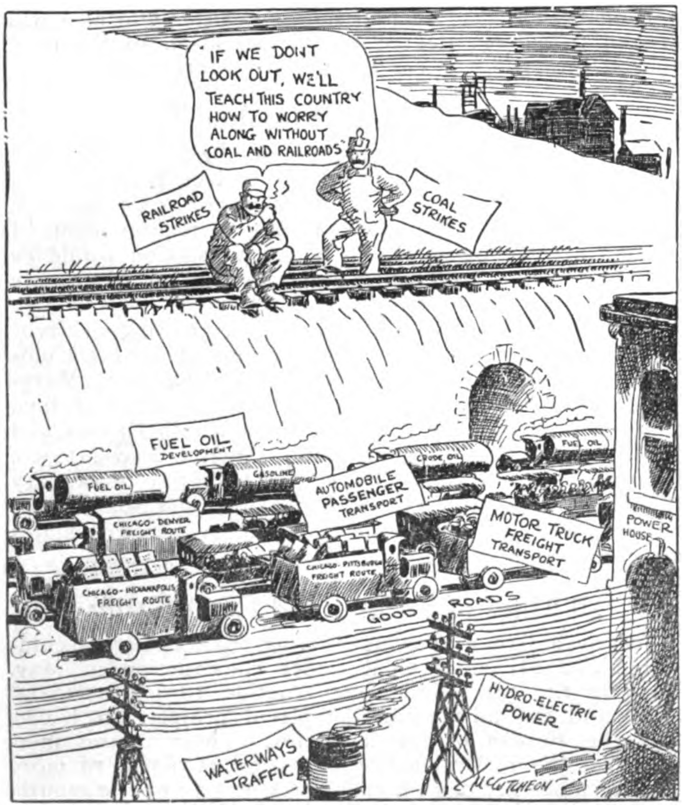
In stating the situation at length, in the August 1 issue, Motor West quoted a man who generally is stated to have been the chief personal factor in starting California Motor Transport Association, with headquarters in Fresno. Whether he was or whether, as he says, he was not its originator, and statements for and against him, his association's vitality, etc., are details. The big fact is that a number of well known men, in banking and various other lines of business, in Fresno and elsewhere, joined with him in a movement of large scope, to rectify matters which are not functioning properly and consequently are costing commerce in the state millions of dollars annually in waste; a movement of such size and definite purpose, dealing with fundamentals, as nobody had started before.


IF WE DON'T LOOK OUT, WE'LL TEACH THIS COUNTRY HOW TO WORRY ALONG WITHOUT COAL AND RAILROADS
RAILROAD STRIKES
COAL STRIKES
FUEL OIL DEVELOPMENT
FUEL OIL
GASOLINE
CRUDE OIL
FUEL OIL
AUTOMOBILE PASSENGER TRANSPORT
CHICAGO-DENVER FREIGHT ROUTE
CHICAGO-PITTSBURGH FREIGHT ROUTE
MOTOR TRUCK FREIGHT TRANSPORT
POWER HOUSE
CHICAGO-INDIANAPOLIS FREIGHT ROUTE
GOOD ROADS
HYDRO-ELECTRIC POWER
WATERWAYS TRAFFIC
McCUTCHEON

A CHICAGO TRIBUNE CARTOON.

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History, perhaps, will give due credit for what has been begun and given momentum. The movement has awakened some direct co-operation, with the new body recognized as its chief sponsor; also indirect co-operation, partly impelled by the naturally hostil competition of those whose sympathies are bound with California State Draymen's Association, and quite importantly by truck makers and distributors. The latter, who are holding meetings, appear to be proceeding on their own initiative toward centralized, direct effort, and to finance their effort adequately, inviting also the help of organizations interested, whatever their names. Apparently publicity, of a very plain spoken and informative nature, needed by the general public, is not yet being considered.

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It is said that a 26,000 pound weight limit is desired by these trade men, and that approximately 50 per cent of candidates who now seem likely to be members of the next legislature know this and are not unfavorable to that limit. In the last issue it was stated one state senator had said even as high a limit as 24,000 pounds would be difficult to obtain; and the state association of county supervisors is for 22,000 pounds. In this connection, Motor West is informed authoritatively that J. A. Stoner, of the Mack truck, long has been for 26,000 pounds for 4 wheeled vehicles, and that any assertion, direct or implied, that he wants the limit to be 30,000 pounds is untrue. In an interview with a man who attended the San Francisco meeting, Motor West received the impression that Mr. Stoner stood for 30,000 pounds, at the meeting. He was not there. Roy H. Compton, of his company, was.

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In this issue is reprinted an interesting circular issued to employes by a railroad company. It purports to describe a movement for social affairs, in which an enjoyable time will be had by all; a rather transparent comouflaging of what looks like an order to get in line to fight, if not boycott, the most modern transportation method, development of which unquestionably has helped railroads earn more money than they ever earned before on **actual service** investment. No development ever, apparently, will enable them to earn enough to satisfy the Wall Street gentlemen who use **profits** which the people pay on service investment, as **new capital.** They expect dividends on inflated "investments"; on the refinancing issues which they sell to innocents, who perhaps get back only a part, as "dividends"; and on succeeding refinancing issues.

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Reverting to the circular: What would the railroad gentlemen do if, in part retaliation, the automobile and allied industries in California, that pay about $10,000,000 a year in railroad charges, were to have transcontinental shipments come by water? There are many vessels available, and on an automobile it might save a buyer say $50. Railroad "social" clubs, and the rumor of higher freight rates, may move California and other automotive minds more deeply than some railroad one-track minds may consider possible.

The Outstanding Light Truck Value!

The New
STANDARD "75"
1¼ Ton Light Delivery Truck

HOW can *you* afford to handle a cheaply constructed truck and create dissatisfied customers, when you can give them a Standard truck at this remarkably low price

?

$1330 00

(Chassis, at Detroit)

How will you meet the competition of the Standard dealer in your territory? Don't try—*be it!*

What's the discount on this model? If you knew, you would appreciate why the Standard Franchise is so attractive to wide-awake dealers.

And don't forget the Model "75" is but one of a complete line—worm drive—from 1¼ to 7 tons.

Continental Motor—Timken Axles—Spicer Joints—Stromberg Carburetor. These are the types of high-grade units found throughout this Standard model—as in all other Standard trucks.

You invite better profits—and decline trouble—when you take on the Standard Franchise—if it is still available in your territory. *Better write at once.*

STANDARD MOTOR
TRUCK COMPANY
DETROIT, MICH.

STANDARD
MOTOR TRUCKS

Why the Railway Men Rage

Basis of Opposition to Inevitable Motor Truck Told, and Animus in Circular Exposed

THE Senate committee on reconstruction and production has estimated that motor trucks in this country now cover 7,150,000,000 miles, and carry 1,430,000,000 tons of freight, per annum. That tonnage equals a freight train of 95,333 cars, each car carrying 30,000 pounds, or 2383 freight trains of 40 cars each.

There, in a nutshell, is the basis of railway opposition to the motor truck. Almost invariably that which is opposes that which inevitably is to come, or is well on the way, or already has arrived—as the motor truck has.

The opposition to new ideas almost invariably is foolish, and later is supplanted by common sense. It caused fierce railway opposition to the proposed interstate commerce law and commission, 30 years ago. The "best minds" among railway men caused the wasteful expenditure of millions of dollars—all of which, of course, came from the people—to prevent consummation of that idea. The writer was secretary to one man who gave $100,000 directly, and probably as much indirectly, of money which he had obtained from the public for service rendered, to defeat the interstate commerce law. Senator Ingalls, of Kansas, author of the famous saying that Opportunity knocks but once at the door, unwittingly carried through a side door of the Senate chamber, into an executive session, a packet from the writer to Senator Cullom of Illinois, containing a brilliant lawyer's reasons, and an imposing array of figures, against the proposed law. The law came, and railway men would bitterly oppose its annulment.

The present railway opposition to the motor truck is due to the mental processes we all have, and which make all of us about 99 per cent opinionated and 1 per cent open-minded or accurately informed; the processes so interestingly traced to our prehistoric forbears, and analyzed, by James Harvey Robinson. This inborn energy is being exerted against the motor truck's advance, although a large portion of the tremendous travel and tonnage unquestionably feeds the railways, and though another large portion as unquestionably develops territory so as to help railways and which, if it waited for railways to develop it, would wait many years longer than it will, thanks to the motor truck.

What is eating at the feelings of the railway men—feelings comprising primitive ignorance, selfishness, conceit, egotism, "conservatism" and all the other isms put over on even our best minds by our low-brow ancestors—is the fact that any noticeable portion of motor truck traffic is in competition with, and taken away from, the railways.

Railway men deny this—but here is an example of it which proves how insincere their denials are. Including the heading, the following is a verbatim copy of a circular addressed to employes of a railway company:

ORGANIZE TO OPPOSE TRUCKS.

Southern Pacific men and women in San Francisco have organized the Southern Pacific Good Service League, with one of its main objects the combatting of unfair competition by the auto bus and truck lines in territory served by the Southern Pacific Co., and from present indications good work will be accomplished by the organization.

The main efforts of the league to date have been to perfect a strong, permanent organization, which will include employes in the San Francisco general offices, the employes in the Ferry and Post St. ticket offices, and the employes at Third St., Drum St., and Steamer Division T.

Louis Chess, city passenger agent, is president; P. T. Daugherty, chief clerk to the foreign freight agent, is vice president, and James J. Morris of the bureau of news is secretary-treasurer.

The principal objects of the league, as presented at the organization meeting, are:

To assist in combatting unfair competition such as auto truck and bus lines operating in territory served by our lines.

To enlighten its members in such matters pertaining to railroad transportation as will enable them to intelligently discuss the various phases of railroad service.

To obtain business for the Southern Pacific Co. either by individual effort or by reporting prospective business to the traffic department.

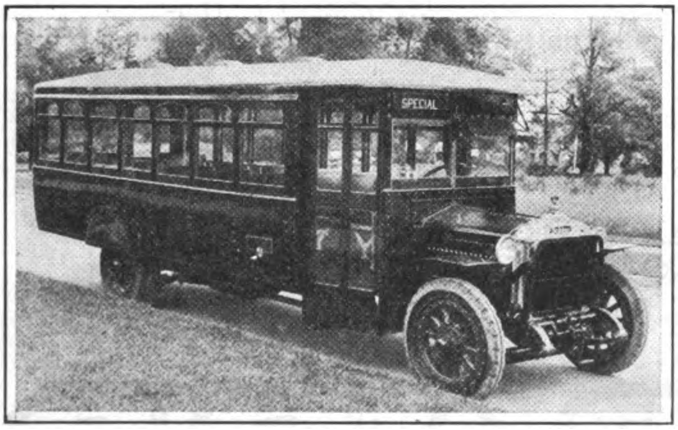
To encourage, by every proper method, cordial and friendly relations between the company and the shipping and traveling public.

Some tentative plans are being discussed by the members for social gatherings to be held in the future, but exact details have not been worked out.

The meetings of the league have been held in the women's tea room at the general offices. A. Campbell, car foreman at Third St., acted as temporary chairman at the first organization meeting, T. Louis Chess later being elected to the presidency. General enthusiasm was shown at the meeting and interesting addresses on the auto bus and stages situation were made by Chess, George L. Christie, L. N. Bradshaw, and others. Representatives were present from the Western Division Southern Pacific Employes' Club, who told of what the men "across the bay" were doing.

It was pointed out at the meeting that the growing inroads into railroad business by the trucks and buses are threatening the jobs of railroad employes, since decreased earnings of the railroads result in reduced forces, and to protect themselves it is advisable to the employes to work against unfair competition of the highway carriers, operating, as they do virtually, tax free over the public highways which parallel the rail lines.

Definite plans are being made by the league to get before the public the true facts concerning the competition between highway carriers and the rail lines, in order that the citizens at large may know that by encouraging the trucks and buses as they are doing at present they are really money out of pocket.



ONE OF FOUR DE LUXE SELDENS USED AT ROCHESTER.
On exclusive East Avenue, Rochester, N. Y., street cars are not permitted. Passengers between the heart of the shopping district and localities in three zones, as far as Pittsford, 8 miles, are served by four latest type Seldens, unit No. 58. These have special 4 cylinder, heavy duty motors, but have not the appearance of trucks. They are like great touring cars—low hung, easy riding, unusually well painted, silent running and easily controlled. They have semi-pneumatic tires and cushion wheels, said to give the same easy riding as pneumatics, with no trouble from punctures and less expense per tire mile. The chassis was designed for maximum safety and comfort and minimum maintenance and operation cost. Its frame is "kicked up" over the rear axle, to obtain minimum height from the ground.

These Farmers Friends of Trucks

More motor trucks are used on the farms in the West North Central states than in any other section of the country, according to Census Bureau figures. Minnesota, the Dakotas, Iowa, Missouri, Kansas and Nebraska have 33,000 trucks on farms.

Advice On European Agents

Record of Dealer Is Better Guide to Possible Sales than Estimate By Unknown Promiser

THE evils of exaggerated estimates of possible sales of automotive products in foreign markets are shown strikingly by M. H. Hoepli, assistant chief of the Automotive Division of the Department of Commerce, in an article for a resent issue of Commerce Reports.

A contract or agreement in which a dealer assumes the obligation of disposing of a certain number of a manufacturer's cars is an instrument serving as a guide to both parties concerned, says Mr. Hoepli. For the manufacturer it represents a basis for future production; for the dealer, as a norm by which he gauges his sales efforts. By its nature, the agreement should thus result in benefit to both parties; if it works to the detriment of one of them, the agreement is faulty.

Years of extreme commercial fluctuations, such as 1918, 1919, on one hand and 1920, 1921 on the other hand, are likely to witness a maximum of unsound contracts and their detrimental results. In 1918 and 1919 the dealers in American cars could sell all they were able to obtain, and to obtain a certain number they became used to asking for a multiple of this number. Consequently, sales estimates were exaggerated and sales agreements "inflated." In 1920 and 1921, the years of deflation and depression, the manufacturers, to deplete their inventories, held dealers to their contracts, with a result that most of the latter suffered considerable financial hardship and many of them went into bankruptcy.

In 1922, the consequences of the past four years' experience make themselves felt. The dealers who were chiefly responsible for the overestimates and unsound contracts are placing conservative estimates. However, the results of the most rapid improvement in the home market already reflect themselves in the attitude of the American manufacturer. The reasonable, in many instances perhaps overpessimistic estimates of the foreign representatives are criticized severely and frequently burdensome contracts are forced upon them—even at the risk of losing well established dealers, or at least their good will.

Several such instances have come to the attention of the Automotive Division lately. In one case, which may serve as an illustration, an American manufacturer, who was about to introduce his new medium priced car in a market, went so far as to request that a very successful dealer of highest standing, and with an excellent sales and service organization back of him, pledge himself to sell a number of cars over twice as big as the highest mark ever reached by a well established competitive car of the same class. The situation is the more noteworthy as, in the face of most favorable offers from European manufacturers, this dealer has remained singularly faithful to American motor cars and tires. While thus the undoubtedly most desirable dealer refused to be forced into a contract to which he could not subscribe wholeheartedly, the manufacturer was relying upon a number of solicitations for the agency of this car from parties willing to meet his conditions. A careful investigation by the local representative of the Department of Commerce, who is highly regarded by the automotive industry, showed that these offers came from parties who had either no standing whatever, or no previous experience, or no capital to back them up, or no selling and servicing organization. What would the results have been, had the agency of the American car been accorded to one of these promising prospective dealers?

The lesson is plain. The past record of a dealer is more important for future business than promising estimates. If a dealer has been successful, his suggestions should be followed although they may seem overconservative, as he knows his territory better than the manufacturers.

Studying Radio for Service Car Work

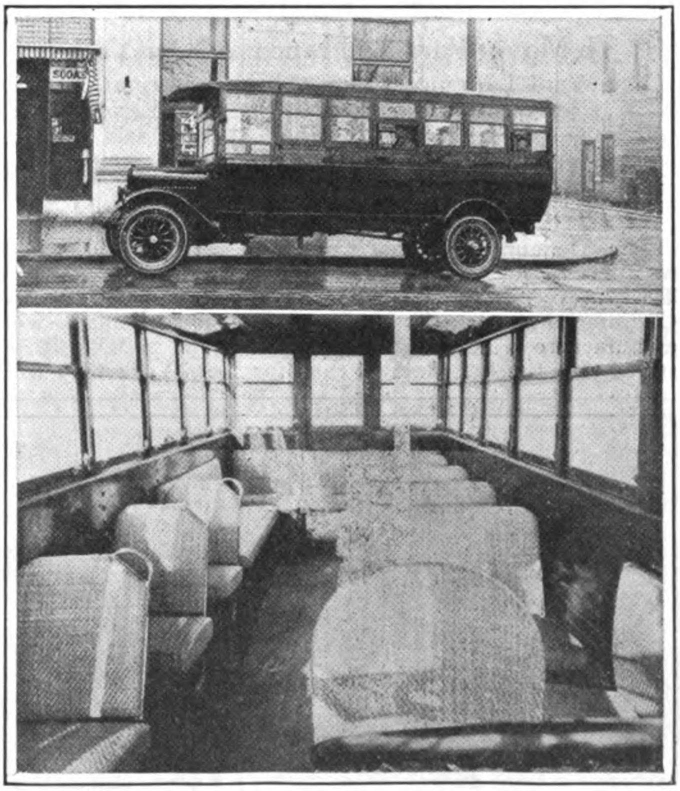
Research on the commercial possibilities of radio for automobile owners is being made by A. H. Sowers, of Lexington Automobile Co., Boston. Mr. Sowers, with Earl Hanson, radio expert of Reading, has begun an investigation of radio apparatus and its possibillities for use on Lexington service cars in Boston. Utility of the idea, and an estimate of the probable costs of installation, are being worked up.

Mr. Sowers has delved far enough to learn that while it is possible to communicate from a service station to truck drivers, the real difficulty lies in the driver talking to the station. It is easy to give a driver a receiving set, but Government regulations require obtaining a permit for a certain wave length before equipping the service car with a transmitter.

Trucks Popular with New York Florists

The motor truck has become a great value and assistance to concerns in New York City's flower market. In transportation from the nurseries to the market the factor of time is especially important as to delicate cut flowers, which must be handled with the greatest care and protected from changes of temperature.

B. W. Ruark, for some time with Pittsburgh Auto Equipment Co., and previously on the Champion Spark Plug Co. sales force, now is attached to the office of Commissioner William N. Webster, of Automotive Equipment Association, in Chicago, as field secretary.



GMC BUS HAS EXCELLENT SEATING ARRANGEMENT.

One exterior view of the 20 passenger bus put out by General Motors Truck Co., Pontiac, Mich., this season, already has appeared, with description, in Motor West. Another exterior, and the seating arrangement of the interurban model, are shown here. This seating plan permits roominess although. because of the general narrowness of roads, the width of the bus is only 74 inches. Note the slight overhang at rear, only a few inches beyond the length of the frame. This minimizes bouncing, side sway and whipping. With the long wheelbase, 36x6 cord tires and exceptionally long, flexible, semi-elliptic springs, easy riding and balance are assured.

Carries Any Style of Body

Quality, Simplicity, Accessibility the Standard Company's Objectives in New Truck Chassis

STANDARD Motor Truck Co., Detroit, in bringing out its new model 75 chassis, has followed its policy of building a quality truck first and figuring the price later. The problems of distributors and dealers also were considered in fixing the price at $1330 at the factory.

F. J. Fisher, general sales manager, states that the design of the new model permits the mounting of any style body or equipment on the market. Every dimension has been checked carefully with the latest standards and engineering practices to insure this adaptability.

Simplicity and accessibility were the principal objectives of the Standard engineers in planning this all-quality light duty speed chassis. Many of the refinements embodied in the other Standard models were developed and incorporated in the model 75.

Its cleancut lines and rugged construction are particularly noticeable. The units embodied in its construction are characteristic of Standard trucks for the past ten years. Each unit is nationally serviced and known as a quality product.

Republic at 50 Per Cent of Capacity

Improvement in the motor truck business is reported by many companies. Production of many of these is 50 per cent or more of normal, or capacity. Republic Motor Truck Co., Alma, Mich., is working at 50 per cent of capacity.

To Move Ward La France to New York

The Ward LaFrance Truck Corp. property at Elmira, N. Y., sold recently to Walker Motors, Inc., of New York, will be moved to New York, where there is said to be a market for the truck designed by the Elmira company.

Diamond Taxicab Company Launched

The Diamond Taxicab Company has been launched with Frank L. Klingensmith, Frank F. Beall and Harry T. Hanover, who is president of the Apex Motors Corporation, among its backers. The new company will manufacture a taxicab to sell for about $1200. It is stated that the first fleet of cabs for New York City will number 1000, and that the contract for the initial unit of 250 has been filled. Also in the new company are O. D. Haverich, Fred Lewis and Senator Owen, of Oklahoma.

Motorized Sheep and Poultry Schools

Sheep and poultry schools built on motor trucks and traveling through rural sections have been organized by the Department of Agriculture in co-operation with the state colleges of agriculture of North Carolina and Texas. Officials of the department say more of this method of education is needed, so that information on latest farming methods may be carried directly to farmers no matter how inaccessible the community may be.

Motor Trucks Displace Milk Trains

"The quantity of milk hauled to Philadelphia by motor truck increased 400 per cent above that shipped in 1920, being over 21,000,000 quarts for the year," says the secretary of the Interstate Producers' Association.

"Less than 3 per cent of our milk now goes into Cincinnati by rail. It is all carried by motor trucks," is a statement by the secretary of the Cincinnati Producers' Association.

Trucks Haul Cherries 60 Miles

From the cherry orchards of Wenatchee, on the Columbia River in Washington, to the cannery at Yakima, and return, is 120 miles, practically a long-haul trip. However, Royal Anne cherries are now being hauled by truck between the two cities. Each vehicle carries slightly more than 2 tons of fruit a trip, making the round trip in 8 hours.

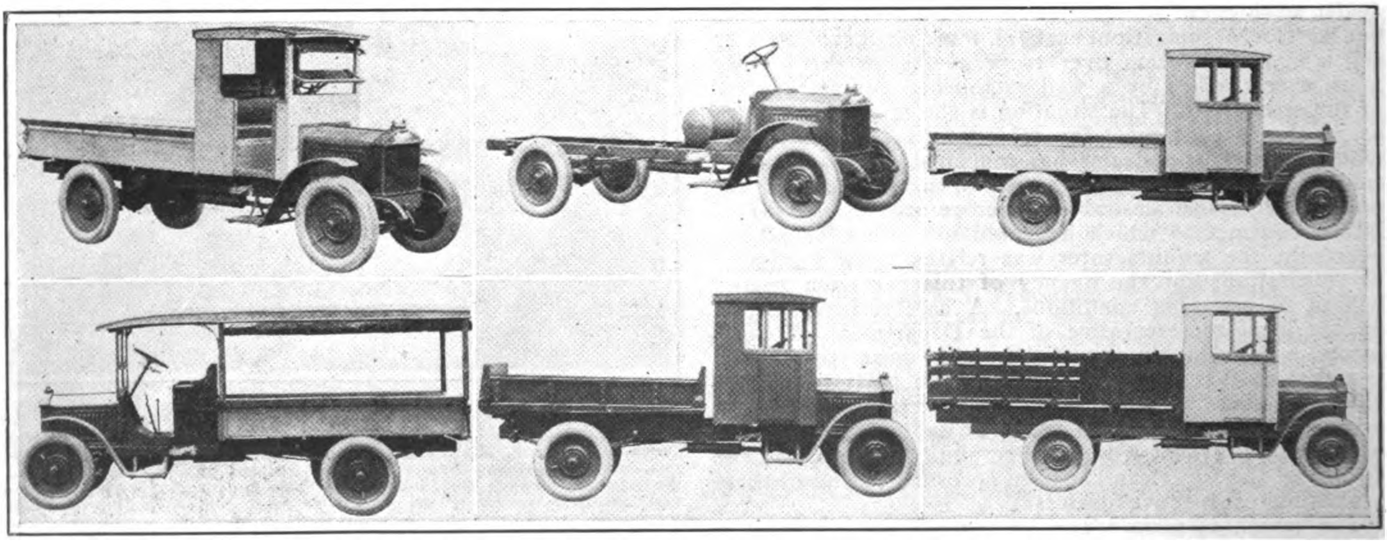
Longest Milk Route Using Trucks

The longest milk route in this country, if not in the world, is now using 1500 gallon glass-lined thermos tanks, mounted on trucks. It is reported that these tanks eliminate a large percentatge of leakage loss. The milk arrives at San Francisco at a temperature only 2 degrees higher than when received in tanks at the cooling station.

Erie Official Sees Aid in Trucks

T. C. Powell, vice-president of the Erie Railroad, remarked in a recent address that "the railroads must be relieved of the unprofitable short haul and terminal traffic, and they look to the motor truck, including the farm motor truck, to bring this about."

"Thank you for calling" is a phrase that pays.



STANDARD MOTOR TRUCK COMPANY'S NEW MODEL 75. ABOVE THE VIEWS OF THE CHASSIS AND OF TWO TYPES OF BODY FOR IT. BELOW, THREE OTHER BODY TYPES.

General Motors Trucks

Only by selling a motor truck which so impresses its users by its performance, its economy and its long wearing qualities that they continue to purchase the same truck—

Only by being a dealer for such a motor truck, can any man hope to build the permanent, profitable business that should be the goal of every motor truck dealer.

The steady growth of repeat orders for GMC trucks in all parts of the country is the finest possible evidence of the way in which these trucks impress their owners, and also of the possibilities which a GMC dealership affords for establishing a lasting and successful business.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 2 Ton $2375 3½ Ton $3600 5 Ton $3950
Chassis Only—At the Factory—Tax to be Added

Twenty-Seven in One Order

Republic Knight-Motored Bus Is Victor in a Difficult Baltimore Test Lasting Five Months

WHEN a company like United Railways & Electric Co., Baltimore, that has had more than seven years of experience in running buses of all kinds in connection with its railway lines, orders as many as 27 Republic Knight-motored buses, both hard testing and satisfactory results are indicated. The test was very thorough. S. R. Swiss, advertising manager of Republic Truck Sales Corp., Alma, Mich., says:

"During five months they subjected our bus to passenger loading and mileage equivalent to nine months of normal operation, and careful comparison with their other buses was made. You can imagine we were gratified by the order. I was in Baltimore when our buses were put into actual operation, and the interest not only was keen throughout the city but among our competitors, as well as among representatives of other railway companies operating in numerous cities throughout the country.

"We organized our public utilities division a little more than a year ago, and placed at its head Ralph M. Sparks, a railway expert of very wide experience and acquaintance. Careful investigation convinced us that to successfully market our bus we would have to incorporate a number of important details to conform to the peculiar requirements of the passenger-carrying field. After considerable study our engineering department designed the Republic Knight-motored bus, its chassis being of special construction to assure efficient service under conditions of hauling constantly varying loads, making numerous stops, and particularly bearing in mind the comfort of the riding public. We succeeded in installing a sample bus with the Baltimore company, and the order for 27 buses is the very pleasing result."

Positive evidence of rapidly improving business conditions is reflected in the volume of sales now being enjoyed by Republic Truck Sales Corp., Alma, Mich., according to Col. Frank E. Smith, president, who says:

"From a sales standpoint, June was our best month in two years, and during the first six months of 1922 we sold more Republic trucks than during the entire year of 1921."

Transport Co. Sales Excellent

Motor truck sales are active and increasing constantly. In percentage at least the business is showing gains that promise a splendid excess of the old "normalcy" marks, is the belief of Transport Truck Co., Mount Pleasant, Mich. For several months its sales have surpassed those of any corresponding period in its history. These extraordinary sales of its complete line are bringing to Transport some of the largest and most successful motor truck distributors in the country—in New York City, Brooklyn, Harrisburg, Pa., Allentown, Pa., Columbus, O., Youngstown, O., St. Louis, Nashville, Tampa, Wichita, Denver and Minneapolis.

Transport officials regard all this as indisputable evidence that business conditions are picking up, with a greater need for transportation than ever, and that the motor truck is coming into its own.

"We are meeting this demand," says President M. A. Holmes, "not only with a complete line (from the 2000 pound speed job to the 10,000 pound heavy duty), but with quality for long life in the hardest service, and fair prices below the pre-war level."

New Standard Four Coming

Standard Motor Car Co., will soon be ready to market a 4 cylinder car. It will be a companion to the Standard Eight.

The new Standard factory buildings recently completed at the Butler, Pa., plant are admirably appointed to take care of volume production. The 2 story main assembly building is 800x200 feet and equipped with track system of progressive assembly. It is estimated that within a reasonable time after production of the new 4 cylinder model begins the combined output of eights and fours will reach 150 per day.

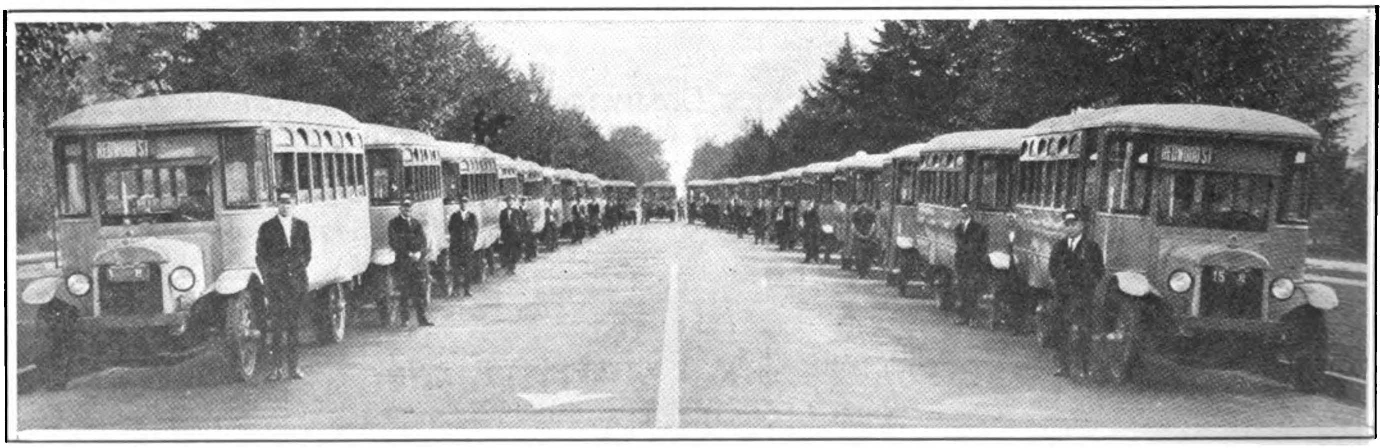
Quite recently the general offices were transferred from Pittsburgh to the main plant at Butler. Departments included in the removal were executive, engineering, sales, advertising and service.

Make the Grade Alone, to Win

"It takes close figuring these days to get and hold business," says Frank P. Hunt, distributor of GMC trucks in Rochester, N. Y. "Among our customers is one man who is thinking all the time. He went into a gravel hauling competition not long ago. Part of the road was a pretty stiff grade, and where our man won out was that his loaded truck went up on its own power. The other fellow was delayed every time because he was waiting for help from one of his other trucks. It was the time saved on the grade that did it."

New Federal Light Delivery

The Federal Motor Truck Co. announces a new Fast Express, for light delivery. Federal officials say its load limit is the capacity of its tires, and that it is capable of a sustained speed of at least 35 miles per hour. It has 5 inch cord tires, considerably larger than those on most trucks of its capacity.



THE TWENTY-SEVEN REPUBLIC KNIGHT-MOTORED BUSES ORDERED BY A BALTIMORE PUBLIC UTILITY COMPANY.

Tractor Department

Oregon's Power Farming Caravan

Oregon's first industrial and power farming caravan left Portland recently for what promised to be the greatest tour ever held in the West, to demonstrate the use of trucks, tractors and power machinery generally upon the farm. The caravan, directed by the Oregon branch of Ford, was participated in by a dozen or more other large interests, to cover over 4000 miles in Oregon and be out more than 3 months.

About 40 trucks, tractors and trailers are required to handle the entire equipment. These are in charge of a small army of drivers, mechanics, demonstrators and lecturers.

Leaving Portland the caravan made a direct run to Ashland, near the Oregon-California line, making brief stops at the most important points. Then the route was to Ashland, where the first complete demonstration, occupying a day, was given. Then followed Medford. From Medford the caravan worked north gradually, stopping at all central points both on and off the main highways. About six weeks were to be devoted to that territory. Then back to Portland, for a demonstration of about three days. The second run out from Portland is to cover the coast section and the lower Columbia River country; following, the route is into Central and Eastern Oregon.

At each stop there are complete demonstrations of the various types of machinery, with lecturers to make everything clear. Lessons in practical operation are given to those who wish it. Motion pictures and radio concerts are included in the program; all free.

Associated with the Ford Co. in the enterprise are: Oliver Plow Works; Ersted Machinery Mfg. Co.; Parson-Gordan Co. with the Lee line of dump bodies; Francis Motor Car Co. with the Hercules commercial truck body line; Talbot & Casey, with trailer and tractor equipment; the Delco light system and other products of the Modern Appliance Co., and several other lesser concerns.

W. H. Goodwin, manager of Ford's Oregon branch, is in charge. Last year he was associated with the Ford branch in Washington and had charge of the caravan in that state, and which was a big success. The Oregon caravan is being carried out along similar lines, with such improvements in arrangements and program as have been suggested by the previous venture.

Keen Interest in Farm Films

Returns from a questionnaire on motion pictures, sent to some 3000 extension agents by the Department of Agriculture, indicate that county agents and other extension workers in general are interested keenly in educational films. Of 982 agents reporting, 815 are in favor of using motion pictures in their work, 13 are opposed to them, and 145 noncommittal.

About one-third of the agents reporting say that they use motion pictures, and about one-half of those who use pictures have had experience with portable projectors. Only 8 per cent of those who use portable projectors have found them unsatisfactory.

There is strong demand for more films on livestock subjects, club work, soil improvement, and co-operative marketing.

Many agents ask for "more fun" or "more human interest" in educational films, and there is considerable complaint of slow distribution. This last objection the department hopes will be met eventually by the establishment of adequate state distributing centers.

Social Duties Too Much

"What kind of farming experience did you have?" asked the reporter.

"Well, son," replied the philosopher, "I only had a light attack. When I lived on a farm all you had to do was plant, cultivate, mend fences, hoe weeds, milk cows, slaughter pigs, doctor sick chickens, fix windmills, go to town after the mail, argy with lightnin' rod agents, attend the county fair once a year, cut wheat an' have it thrashed, shuck corn, churn butter, dig potatoes, buy fertilizer, mend the breakin' plow with a piece o' wire, break colts, wash the wool, and do things like that. It was hard enough life then, but just think what it is now, havin' to be a farmer and keep up with the radio, fox trottin', silk shirts and at least two cars! Son, even at my age I might go back and do old-fashioned farmin', but I'd never be able to keep up with a modern farmer's social duties."—Indianapolis News.

One Way to Clog the Wheels

A good way to kill a farmers' organization is to pursue the following course: Don't come to meetings, but if you do attend, come late and find fault with the work of officers and other members. Never accept office yourself, on the theory that it is easier to criticize than do things. But by all means gets "sore" if you are not appointed on committees; however, if you are, never attend committee meetings. If you are asked by the chairman to give your opinion on any subject, tell him you have nothing to say, but after the meeting tell everyone how things ought to be done. A farm center officer got something like this off his chest not long ago, and we think it good enough to print.—L. A. Times.

Studying Many Farm Problems

Various state agricultural experiment stations are studying 4770 specific problems relating to agriculture, according to a compilation of project subjects made recently by the Department of Agriculture. Broadly grouped, 1960 subjects, dealing with such subjects as field crops, soils, and fertilizers, are about one-third of the total; 932 botanical and horticultural problems are under investigation; animal industry subjects, including dairying and dairy products, comprise about one-eighth of the total, leaving three-eighths of the projects for all other subjects.

Weepy Stuff from Salome, This

In the Sun of Salome, Ariz., Dick Wick Hall says: "Melons don't do very well here, because the vines grow so fast that they wear out the melons dragging them around on the ground. In dry years we plant onions between the rows of potatoes, and then scratch the onions to make the potatoes' eyes water enough to irrigate the rest of the garden."

Little Jackie Coogan, as an orphan in a play, is adopted. Before climbing into his benefactor's Ford he gazes at it raptly and exclaims: "O-o-h! Is that yours? How beautiful!"

Trade Briefs & Factory Gossip

NOTES BY "ON-THE-SPOT"
(F. Ed Spooner, Detroit)

"Ain't it the truth?" replied one maker when told that the coal strike would mean curtailment of production in his plant. Another maker said: "Just one darned thing after another!" And that is the truth. Since the inception of the industry, year after year has brought its troubles. Coal shortage, labor shortage, lack of transportation facilities compelling driveways, banking troubles and many other things have arisen in years gone by—just as they will arise again and again; and it has been said that automobile manufacturing is either a "feast or a famine."

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August is expected to break record in sales of motor cars and trucks to farmers, who have had two bad years. Also, many of their children have grown up and launched out for themselves and must have cars.

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Big combinations are absorbing company after company. Durant's progress is watched with interest. Lately he bought the greatest automobile plant in the world, at Elizabeth, N. J., and the Locomobile plant, and is headed toward active competition with General Motors. The combination of passenger car and trucks and parts makers recently announced, with $80,000,000 capital, and the combination of several truck companies, a tire company and other concerns making parts, is still another. More will follow, without a doubt. Long ago it was predicted by the writer that when business again picked up companies would enter combinations.

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Factory men who observe and remember are commenting on the report that small town bankers in the Middle West are amazed by the way the automobile industry "came back." One such report is from Missouri. Well, the bankers there and elsewhere, who followed a vague tip from "somewhere" and fairly froze up on automobile credits, certainly have been shown.

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As to the recent attitude of a banker in Oklahoma, in what he said was a strong reminder of a Houston banker who, in the summer of 1920, said: "No use talking. The farmer must be forced to give up the motor car and the motor truck. He must get down to work, real work such as my father, a farmer, forced me to do when a boy. The motor car and motor truck are a bad influence on the farmer, who often spends an entire day getting his truck to run so he may go to town the next day. Farmers can succeed only by hard work, and automotive devices mitigate against success."

The Oklahoma banker, recently quoted is said to have said: "When a farmer came to me for a loan on his farm I told him I would not loan him on the farm, the farm machinery nor the prospective crops, but I would loan him money on the rear wheels of his motor car provided he would bring them in and leave them with me."

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He meant about the same thing as the Houston banker. It is apparent that these men believe the farmer, released from actual slavery of old by "automotive devices," should return to slavery; and that only thus will success again come to the tiller of the soil.

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The attitude of the bankers was a revelation of limited thought. Today they probably have changed their minds. Their position was taken when the farm business was weak, not for lack of crops but on account of general business conditions.

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How ridiculous such an attitude, in view of the real facts! Today farmers and their families enjoy life, their boys are more easily induced to stay on the farm, and all because automotive devices have enabled the farmer to till his soil, harvest his crops, deliver his crop and give his family recreation, in a minimum of time.

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Formerly, many farmers' wives went into insane asylums, and the boys and girls escaped to the city as soon as possible after leaving school and seldom returned. Today, farm children drive 20 miles to modern schools, the family travels distances impossible with the horse—to the city, for the movies and other amusements. The farmer transports his produce to market in a few hours and is back on the farm hours quicker. He is able to do the family marketing in comfort and at speed.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

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One of the most successful salesmen in the motor truck field was a man from a town of 400 inhabitants in New Jersey, who simply traveled in a motor truck, stopped for a time with some farmer without talking truck at all, and offered to take the produce of the farmer to market, "as he was going to town anyway." That salesman told the farmer to go to bed and they would start at say 3 a. m., whereas the farmer, with horse power alone, had been accustomed to driving all night to reach market, and until late the next night to return. With the produce loaded on the truck they started, rolled into the market on time, cleared the merchandise and reached the farm at noon. Again and again the farmer said: "If I only had one of those I'd get some rest"

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And he got one. Once started, he also got a passenger car, and his family began to enjoy life; and then he got a tractor. His time for rest and recreation increased amazingly and his family life improved, for the wife and children escaped monotony, driving to the cities and seeing something of crowd life for a change.

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The camps for motorists all over the country are full of farmer tourists, and not a farmer in the land but calls upon his God to bless the men who invented the automobile and its side kicks, the truck, the tractor, the power engine and so on.

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Down in Maryland, some distance from Washington, a government committee came across a territory far removed from the railroad upon which it had been dependent, in which the motor truck had enabled the farmers to insure profits lost in the past through late trains, bad roads and other causes, and on farm after farm twice and in some cases three times as much acreage was used as before the truck came.

Young Now With Willys-Morrow.

J. A. Young, formerly of Sheldon Axle Co., now is general manager, in charg eof sales of Willys-Morrow Co., Elmira, N. Y. He has charge of all sales of products which are supplied to other companies outside the Willys interests.

Allan A. Ryan's Stutz Stock Sold.

Automotive interest in Allan A. Ryan's affairs is very human, aside from their possible effect on those of Stutz Motor Car Co. of America, of which Mr. Ryan formerly was president.

August 2, in New York, the Guaranty Trust Co., trustee, and other banks holding Ryan's securities auctioned them. The banks themselves bought them. The Guaranty Co. had 111,614 1/3 Stutz shares. It has been stated that these would have to be worth $60 each to clear the Ryan indebtedness. It appears the company's present prosperity indicates their value as about $29. During the famous corner Mr. Ryan engineered, they were in demand for as much as $700 a share. Late in July $15 a share was refused on the New York curb. Besides the Stutz shares, the Guaranty Co. listed a variety of other stocks and commercial paper.

It was first announced Ryan's liabilities were about $32,000,000, but there were duplications and the total went down to $18,000,000; and as Schwab and other leading unsecured creditors subordinated their claims to those of the banks, the unsecured total is said to be only about $500,000. Schwab is quoted as saying he believes Ryan will "come back." His firm, it is said, may be reorganized. His partner, K. R. Howard, also is insolvent.

There was a rumor that Ryan's father, Thomas Fortune Ryan, would buy his son's assets offered at the sale.

It was 125,000 shares of Stutz stock that Ryan cornered in 1920. His sister-in-law, suing him for nearly $2,000,000, is said to claim she could have sold very profitably then but held her stock to help Ryan. There are other similar suits.

The bankers, before the sale, denied any desire to wrong other creditors by the sale. It was pointed out that Ryan had been unable to meet his obligations though given 18 months extension.

What was stated to be a balance sheet of the Stutz Co. appeared in New York July 28. It showed fixed assets of $4,400,089; current assets, $1,912,067, consisting of $1,507,450 in merchandise inventory, $256,148 in accounts receivable, $148,468 in cash. Other assets, $13,643, and deferred charges, $130,008, made total assets $6,455,809. Liabilities: Capital stock, 200,000 shares issued, no par value, at $5, total $1,000,000; current liabilities, notes payable, $150,000; accounts payable, $243,062; accrued accounts, $33,467; reserve for depreciation of plant and equipment, $555,927; surplus, $4,473,351.

* * *

Stutz Boom Looked For.

Stutz Motor Car Co. of America's shipments, the first half of 1922, totaled 70 per cent of all of 1921, is the statement of Sales Manager Fred E. Wilson. A steady increase began early in the year. May shipments exceeded those of May, 1921 by 300 per cent. The same was true of June. During the six months there never was a difference exceeding 5 per cent between production and retail sales. In July retail sales exceeded production about 25 per cent. No cars have been forced on dealers. The new Stutz D-H engine, the compensating spring suspension now used, other improvements and refinements, and the new liberal sales policy, are doing the trick.

Stutz Motor Car Co. of America has been doing very well, but it is expected to do much better. Confidence in its management was shown by the re-election of W. W. Thompson as president and general manager, and the reappointment of practically every important executive. In the first half of 1922 its shipments totaled 70 per cent of the entire shipments of 1921.

* * *

Reeves on 1923 Outlook.

September 13, 14 and 15 will be notable automotive days in Buffalo. The meeting of the Motor and Accessory Manufacturers' Association will be attended by many others than parts makers, because what those makers say these days are of much significance and because some talks of wide import will be made.

Not the least of these will be the one by Alfred Reeves, general manager of the N. A. C. C., on trends of the industry and the outlook for 1923.

C. A. Dana, president of Spicer Mfg. Co., will speak on Integration and Mergers.

Credit men will have much to say, among themselves and to the automotive world. T. M. Thompson, credit manager of Continental Motors Corp., whose motors are used so widely, will tell how creditors can aid in rejuvenation and reorganization of embarrassed companies.

* * *

General Tire Co. Dividend.

General Tire & Rubber Co., Akron paid the regular quarterly 2 per cent common stock dividend the first week in August. It has not missed a common or preferred dividend since is began 8 years ago. The common is quoted at over 200, with none for sale.

The management says the plant is working at capacity, and doing the largest business in its history. Its business has increased yearly. It did during the recent depression.

The product, pneumatic tires and tubes, are not sold to car manufacturers but to the public through dealers.

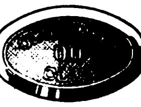
* * *

Rickenbacker Car's Birthday.

The third birthday of the Rickenbacker car, and the production of the 2500th car, were celebrated at the plant in Detroit recently. ...

* * *

Prayer is powerful if it is mixed with sweat.—Capper's Weekly.

Ye Olde  Timers

Officers of the Old Timers' Club: President, William L. Hughson, San Francisco; secretary, F. Ed. Spooner, 420 Book Building, Detroit; treasurer, J. Ed. Schipper, Detroit. There are 11 vice presidents, who also are directors. In all there are 19 directors. The personnel makes the organization truly national in character.

Interest in Frank Kramer.

There was quite a showing of interest in the automotive industry as a whole, especially among factory men, in the recent news that Frank Kramer, of Newark, N. J., a man of most remarkable record as a cycling speed merchant, will quit racing and become an automobile dealer.

No wonder. A large percentage of men in this business are cycling old-timers, who marveled at the way "Zimmy"—Arthur A. Zimmerman—used to do 'em all up; riding along apparently any old way, letting them pocket him all they pleased till going time came when, sure as fate, he would swing out, hump his back, extend his long neck forward, and even with a relatively low gear outpedal all to the finish, with seemingly no great effort. Before he drove the pedals around, he drove the grasshopper levers of his Star and Pony Star with similar success. He retired, and tried to come back. The writer saw him try it at Brighton Beach, near New York, when Henri Fournier, who brought over the first motorcycle and motor-tricycle, both with de Dion motor, from France, did the pacing on that track. Zimmy seemed to pedal as fast as ever, but the younger generation pedaled faster, as the times showed.

At that time Kramer was only beginning to shine. His unusually long chin, and the way what it stood for made him persist, attracted attention long before he really amounted to much. His record eventually far outclassed that of Zimmy. Kramer's day-to-day life was clocklike. He did, as a cyclist, what men great in other lines sometimes do—he lived consistently with his undertaking. In racing alone he amassed a fortune said to exceed $250,000. His many friends will wish him success as an automobile business man.

Pot Calling Kettle Black?

There are, of course, tire manufacturers who would not turn out a shoddy tire. However, there has been prediction by a number of men who should know, that the best tires of today and tomorrow—broadly speaking—will not run as long as the best tires of yesterday; and comments are made by some of these men that in the present lively rowdedow about shoddy tires, and the pot calling the kettle black, there is at least a little black on the pot as well.

A Successful Woman.

Miss Margaret C. Taylor, one of the most popular executives in the automobile industry in Pittsburgh, Pa., has the distinction of being the only representative of her sex who is the active head of an automobile business.

All this happened long before the women of the world decided to fight for the voting privilege. Miss Taylor's career is remarkably interesting because it is a story of a woman, handicapped by age-old prejudice, rising from the ranks to a position that thousands of successful men would fight for. And despite all, Miss Taylor remains the true feminine—kind, sympathetic, patient and entirely different from the usual cold-hearted, impatient, stern business man.

Miss Taylor is the general manager of the Pittsburgh-Lexington Automobile Co. at 5920 Penn Ave., one of the oldest firms in the automotive industry. She is eligible for membership in the Old Timers' Club, having been in the trade since 1905. She has been with the present company since its formation in 1908, when she was engaged as stenographer. Later she was bookkeeper, assistant manager, and finally general manager. In the six years under her management the business has more than trebled in volume. It has developed into one of the foremost companies of its kind in Pittsburgh.

* * *

A Notable Haynes Exhibit.

A Haynes idea that works well is working again. Mounted on a velvet-draped pedestal, in the main entrance of the Pennsylvania Railroad station in New York City, a special Haynes 55 touring car is attracting the attention of thousands of people who pass through the station daily. The car will be given away as a door prize by the Women's Aid of the Pennsylvania Railroad System, an organization of the wives of officials and employes of the Pennsylvania lines, in connection with their annual entertainment and dance to be held at the 71st Regiment Armory, October 12.

Members of the Women's Aid are in attendance near the car to answer the hundreds of questions about it.

The car has six wire wheels, two being mounted on the sides, at the front. The body is rich maroon with a double gold stripe around the belt line. Nickeled radiator and windshield, special head lamps and cowl lights, and a trunk at the rear, complete the equipment. The rear of the body is protected by six polished bars.

* * *

Dort Closed Car Philosophy.

"Three times this year Dort production schedules have been radically revised to meet the demand for closed cars," says General Sales Manager John D. Mansfield of the Dort Motor Car Co. "This is not because we did not expect a healthy closed car business—we found at the shows last winter that we had guessed right regarding the general desire for closed cars at nearer open car prices. It was then that our first revision of schedules was made. Today the two types are running a close race. The reason? Just price—that is all. Most people have always preferred a closed car, but felt the difference in price. Now the reason for that difference was limited production, and the remedy obviously was increased production. Dort felt that a reduced price differential would automatically bring sales volume that would insure a paying output. So it has proved."

* * *

Trainload of Haynes Ordered.

Triangle Motors, Inc., Haynes distributor at Chicago, recently ordered a trainload of the new, improved Haynes 55 and 75 models. The huge trainload, pulled by a special engine, left the Haynes siding at Kokomo, August 4.

MISS MARGARET C. TAYLOR.
Miss Taylor has been in the automotive business since 1905. She is general manager of Pittsburgh-Lexington Automobile Co., Pittsburgh, Pa.

This large shipment is stated to be the direct result of the impetus Haynes sales received since the opening of the Pageant of Progress exposition on Chicago's municipal pier, where the Haynes exhibit is a striking feature. The orders were from Haynes dealers in Illinois, Iowa and Wisconsin.

* * *

Studebaker Expansion.

Studebaker is planning for future extensive expansion. The South Bend plants are finally to have a capacity of 500 cars a day. One new building is following another. There are being produced now 200 sixes daily. Preparations for 25,000 to 27,000 sixes in 1923 are under way. Thousands more of men will be employed. The total added force may be 3000.

Detroit Air Cooled Car Co. Personnel.

With production time near, Detroit Air Cooled Car Co. of Detroit, maker of the D-A-C 32 horsepower "twin-three" car, is perfecting its organization and placing orders for parts and other material, with the intention of manufacturing approximately 10,000 cars for the coming year.

President W. J. Doughty has surrounded himself with many well known business men, known throughout the industry in various capacities. Among them are: G. R. Tremolda, known internationally as a leading motor car designer and who is responsible for the unusual design of the D-A-C "twin-three" motor; C. H. Bennett of Plymouth, Mich., president and general manager of Daisy Air Rifle Co.; August Gieseler, Cleveland, superintendent and stockholder of National Tool Co., Cleveland, largest tool manufacturer in the United States. Mr. Gieseler is in charge of manufacturing operations and supervised the building of the first Winton and Packard cars.

John McArthur, of Detroit, who has been actively engaged in coach and body building for 42 years, is designing the D-A-C bodies, which will consist of a 5 passenger touring, sedan and coupe. Besides being an experienced body builder, he also is well known as a production and cost engineer and for the past 15 years has installed many plants.

Frank Sanders of Chicago, who for many years was a Franklin factory representative and later the largest Franklin distributor in the United States, with headquarters in Chicago, will devote all his time to the new D-A-C and be located in Detroit.

George Gagnier of Detroit, a manufacturers' representative of automobile supplies, also is financially interested, as is Earl B. Newton, secretary-treasurer of Mansfield Steel Corp. and treasurer of King Trailer Co., both of Detroit.

* * *

Maxwell Does Well in Canada.

Unanimous approval of the Maxwell situation in Canada was voiced at a recent meeting of directors of Maxwell Motor Co. of Canada, in the Windsor offices opposite Detroit. Sales prospects were reported as exceptionally encouraging, and this, combined with the taking over of a certain amount of Maxwell export business in British possessions, bids fair to keep the Windsor plant at production peak many months. The plant is now about two weeks behind in deliveries.

* * *

Columbia Catching Up.

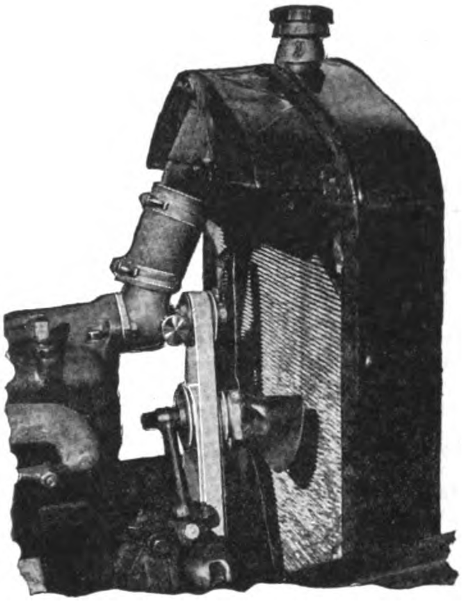
Columbia Motors Co., Detroit, which lessened output became unable to get enough Continental motors for its light six, cleared the decks recently and all was set for 2000 cars a month. The company had unfilled orders for more than 9000 cars late in July.

(More factory items on page 63)

New Things in the Accessories Field

NIMS WATER PUMP.

The Nims water-circulating pump for Ford cars, trucks and tractors is made of accurately machined, high speed material, with a scientifically designed long bearing and propeller. It is attached at the bottom of the manfold section leading directly to the radiator top. The special bearing, preventing escape of lubricant and shutting out dirt and water, is especially noteworthy. Instead of having the shaft running straight through the bearing, the Nims device has an end thrust shoulder in the bearing with a corresponding shoulder on the shaft, and as water is drawn in, these two shoulders pull together, forming a leak-proof closed bearing. The specially designed impellor moves a large volume of water with small power consumption, and permits having a 3 inch bearing in a 4½ inch pump. Bearing is surrounded by water, hence water-cooled. Pump is of high grade, long service bearing bronze. The Nims pump for the Fordson tractor is of grey iron casting and an exact duplicate of the car and truck pump. These pumps are designed to speed up the sluggish Ford thermo-syphon water circulation without making any changes necessary, and take but 1/36 h.p. on the belt drive at full speed. Ford car and truck model, $5; extra belts, 65 cents; Fordson tractor model, $15. Makers, Nims Pump Co., Stockton, Calif.

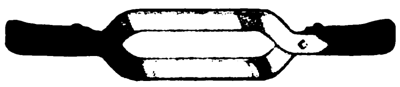


NIMS WATER PUMP.

NEW ERA BUMPERS NOW MADE MUCH HEAVIER.

New Era Spring & Specialty Co., Grand Rapids, Mich., is handling an unusually heavy business this year, and is now working night and day shifts. New Era standard spring bumpers, on the market 5 years, and the newer line of Duplex Senior and Duplex Junior, as well as bumper arms for both types, are now made of much heavier gauge steel.

As previously made these bumpers were very sturdy, and met all tests of Underwriters Laboratories and approval. Yet, to give even greater strength, and added guarding surface, and massiveness of appearance, it was decided to make them still thicker. This change is noticeable in the double bars of Standard spring bumpers, but even more so in the Duplex, which has a much higher arch and larger center opening. This gives the Duplex a very much broader surface, to make it impossible for other bumpers to go over or under.



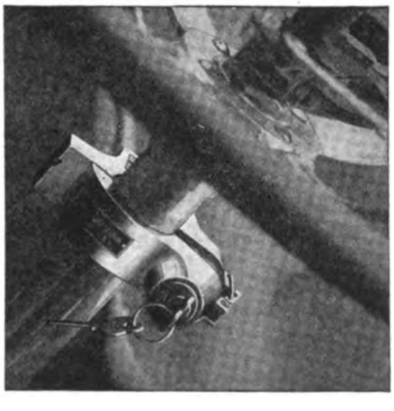
NEW ERA DUPLEX BUMPER.

Jobbers and dealers throughout the country, it is said, are showing strong favor toward the broad New Era interchangeability. All bumper bars are standardized to fit every make of car by use of the correct attaching arms. The New Era factory exchanges the attaching arms free, thus enabling jobbers and dealers to turn over their entire stocks rapidly. Shipments are made the day orders are received, and an ample supply of all accessories is carried in stock, ready for shipment. The company also manufactures the De Luxe All-Metal vizor and several types of popular priced tire and wheel carriers.

Smalley Daniels, president, was one of the veterans who passed through the bicycle era into the automotive field, and has built up a great business through progressiveness, and square dealing with jobber, dealer and user.

SIMPLEX LOCK.

New insurance rulings, including the three-quarters clause, which have been adopted generally, necessitate equipping cars with the best lock obtainable. Insurance companies will not cover a car for more than 75 per cent of its value, leaving 25 per cent of the owner's investment unprotected. The Simplex theftproof lock is for every make of car. It consists of a neat nickel-plated casehardened steel ring permanently attached around the steering column just under the wheel and guaranteed against wear and defect for the life of the car. It is neat, easy to operate, and can be installed in 20 minutes, locking the front wheels rigid in straight ahead position.



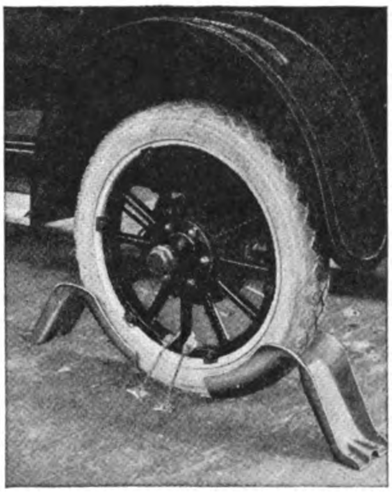
SIMPLEX THEFTPROOF LOCK.

Insurance companies recognize Simplex protection by reducing theft premiums 15 per cent on cars so equipped, giving the car owner double protection at single cost. Simplex model for Ford, $7; for larger cars, $15.

Manufactured by the Simplex Corp., Chicago, and distributed on the Pacific Coast by the Automotive Specialty Co., 1317 S. Figueroa St., Los Angeles.

GIER STEEL BLOCKS.

A number of motor car manufacturers have adopted a new method of fastening down automobiles for shipment by rail from factory to dealer. Using Gier steel loading blocks, instead of the wooden equipment formerly employed for this service, they have reduced loading and unloading time and costs considerably, it is said, and have made cars even more secure from possible damage while in transit. Gier blocks are returned by the distributor or dealer and used over and over again, indefinitely. In a test made in the Buick yards, a carload of automobiles anchored with Gier blocks was kicked against a string of 13 empty box cars with all brakes set, at 25 miles an hour. The couple draft timber and the whole end of one box car were broken by the terrific impact but Gier blocks held the automobiles securely and entirely undamaged.



GIER STEEL LOADING BLOCK.

These blocks are 10½ inches high,

stamped from No. 10 gage, blue annealed stock. They weigh 10 pounds each, and can be returned to the factory by the dealer in bundles of four or more by fourth class rating. Each is stamped with the car manufacturer's name to prevent loss in transit. Figures show it earns its cost in five trips, and many letters from dealers have approved of the new method because of time saved in unloading and because they prevent chafing of tires. Railroads also have endorsed it from a claim prevention standpoint. Manufactured by Motor Wheel Corp., Lansing, Mich.

HAYES WIRE WHEELS.

Hayes Wheel Co., Jackson, Mich., is claimed to be producing more than 50 per cent of the automobile wheels made in the world. Before the addition of wire wheels to the product of the company, some years were spent in research. Wire wheel shortcomings were carefully discounted, and when Hayes wire wheels were put on the market attention was called to exclusive features which at once created a demand for them.

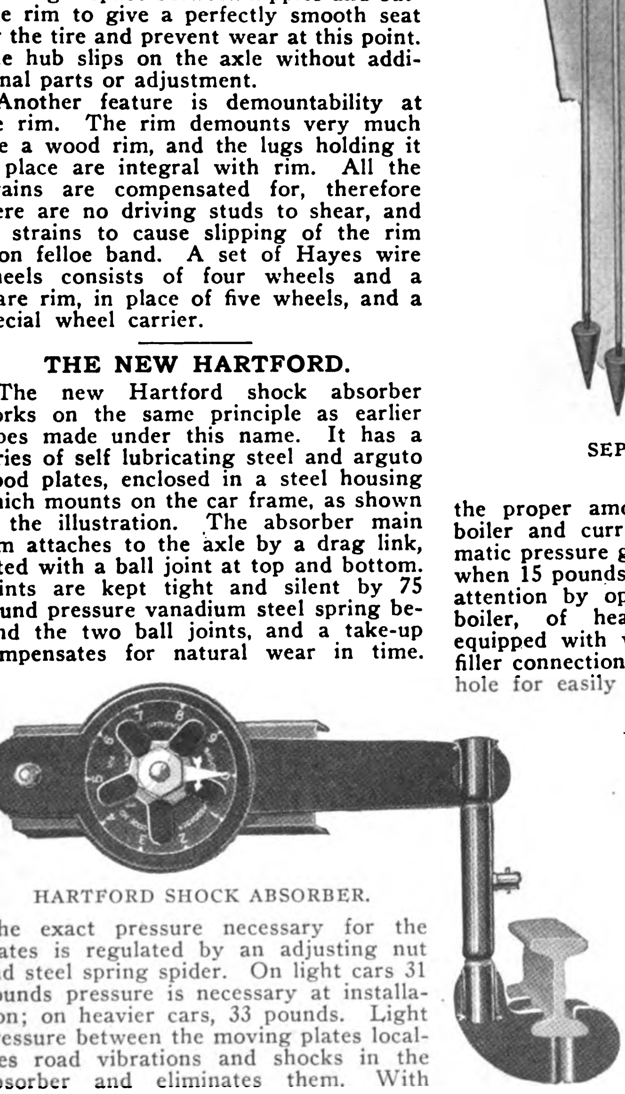
One of the simple Hayes features is in making these wheels interchangeable with wood wheel hubs, a great convenience to the motorist. This also eliminates the possibility of the wheel running off the axle, as it is locked on with axle nut and cotter pin, the same as a wood wheel.

The Hayes wire wheel has a channel felloe, to which spoke nipples are fastened, allowing a space between nipples and outside rim to give a perfectly smooth seat for the tire and prevent wear at this point. The hub slips on the axle without additional parts or adjustment.

Another feature is demountability at the rim. The rim demounts very much like a wood rim, and the lugs holding it in place are integral with rim. All the strains are compensated for, therefore there are no driving studs to shear, and no strains to cause slipping of the rim upon felloe band. A set of Hayes wire wheels consists of four wheels and a spare rim, in place of five wheels, and a special wheel carrier.

THE NEW HARTFORD.

The new Hartford shock absorber works on the same principle as earlier types made under this name. It has a series of self lubricating steel and arguto wood plates, enclosed in a steel housing which mounts on the car frame, as shown in the illustration. The absorber main arm attaches to the axle by a drag link, fitted with a ball joint at top and bottom. Joints are kept tight and silent by 75 pound pressure vanadium steel spring behind the two ball joints, and a take-up compensates for natural wear in time.



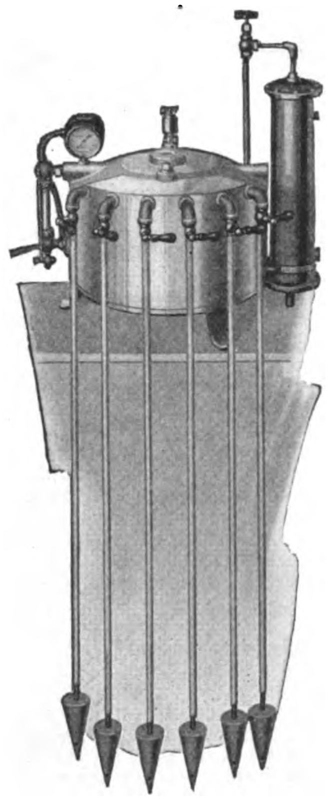
HARTFORD SHOCK ABSORBER.

The exact pressure necessary for the plates is regulated by an adjusting nut and steel spring spider. On light cars 31 pounds pressure is necessary at installation; on heavier cars, 33 pounds. Light pressure between the moving plates localizes road vibrations and shocks in the absorber and eliminates them. With heavier bumps or depressions the gentle control of the absorbers on the springs takes harshness from the spring action, in effect smoothing the road. It is said to work with equal efficiency under either spring rebound, or compression and flattening. Hartfords have had great success on the Coast, and Edward V. Hartford, Inc., the manufacturers are making carload shipments to this region. Henry Lansdale, 1305 South Figueroa St., is California distributor.

SEPCO BATTERY STEAMER.

Battery service station men will be interested in the new Sepco electric battery steamer, with which the top of any battery may be melted and cells removed in less than 10 minutes, it is claimed. The steamer is automatic in operation. With the proper amount of water placed in boiler and current turned on, the automatic pressure gauge will turn off current when 15 pounds steam is reached, and no attention by operator is required. The boiler, of heavy cast aluminum, is equipped with water glass, safety valve, filler connection, air vent, and large hand hole for easily cleaning boiler. Heating units are of latest double radiating wall immersion type, with two separate 1000 watt units installed in a special recess, in base of boiler. One hundred per cent efficiency is assured because all heat is transferred immediately to the water, and steam can be made very quickly, it is claimed. Rugged and unique construction provides long, satisfactory service.

Steamers are supplied for 110 volts for two or three wire alternating or direct current. Each one is equipped with three steam hose battery leads with special nozzles to insert into filler hole of any battery.



SEPCO BATTERY STEAMER.

Steamer without still sells at $100; with still at $130. Manufactured by Automatic Electric Heater Co., Warren, Pa.

O. K. CHASSIS OILER.

By action of a foot pedal under the driver's foot, or hand lever on the dashboard, any and all parts of the chassis are lubricated by the O. K. chassis oiler, recently placed on the market by Kellogg Mfg. Co., Rochester, N. Y., manufacturer of the well known Kellogg engine-driven tire pumps.

The system includes an oil tank and pump mounted on the engine side of the dash, foot pedal or hand lever on the driver's side, two main feed pipes leading through channel of chassis frame on either side of the car, and swivel and flexible tube connections leading off from these pipes to lubricate the more central bearing points.

The small oil tank has 1 quart capacity, and the pump is directly beneath it. Oil cannot leak from tank, but flows only when pump is operating. However, the main pipes are filled with oil at all times, and the ordinary riding motion of the car through capillary attraction from the working bearings will draw a small quantity of oil from the main pipe, lubricating the bearings as required.

An important feature is found in the oil feed pipes. Instead of having check valves, the line is dammed up by very small holes, leading into the various bearings to be oiled. They help to build up pressure in the pipe sufficient to force oil to the bearings, and regulate the quantity supplied. Pipes are fastened rigidly on frame to prevent loosening and rattle, and swivel and flexible tubing connections are tight up to 1500 pounds pressure.

O. K. installations will be distributed by regular Kellogg dealers. Equipment has already been developed at a recent date for Maxwell, Dodge, Essex, Hudson, Velie, Studebaker, Oldsmobile, Hupmobile, Jordan, Paige, Packard and Rickenbacker cars, and it is said that in addition many installations are now being made at automobile factories.

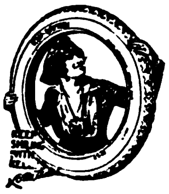
LOMAR SHOCK ABSORBER.

The Lomar Shock Absorber consists of a cylinder with both ends entirely closed, to eliminate dirt or dust from working parts. Two arms, terminating in a cam inside the cylinder, are attached to the automobile spring with the regular spring shackle bolt. The cam operates between two pistons, separated from the ends of the cylinder by properly adjusted special alloy springs. The upper springs absorb road shock, the lower springs smother the rebound. An adjustment nut in the cylinder head enables varying the resistance of the main spring to regulate it to the exact load to be carried. A half pint of heavy oil poured into the cylinder is pumped to the top of the absorber, and flows back by gravity to lubricate all working parts, and all dirt and dust collecting extensions are eliminated. The cam works on a roller bearing on the upper piston which allows it to respond perfectly to the slightest jar or motion, it is claimed. Manufactured by Lomar Mfg. Co., Middletown, O., and finished in black enamel with nickel trimmings.

The demand for Kellys is greater than ever

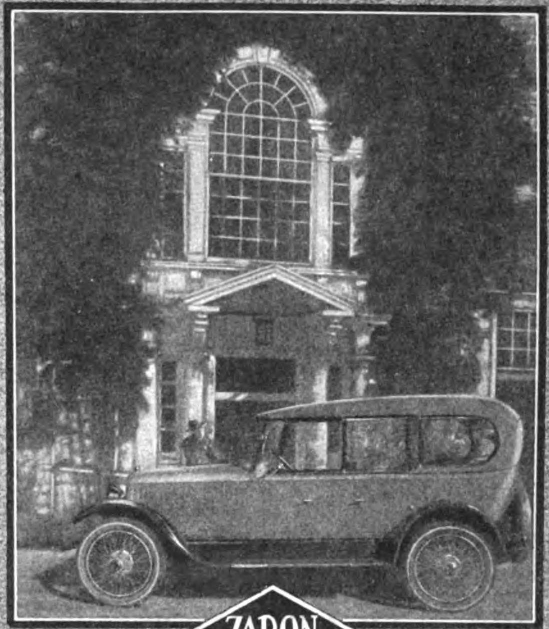
Kelly prices are lower than ever before but Kelly quality is even higher. The Kelly tires of today are the best tires we have ever built. They are not special tires made to meet the demand for low prices but are full size—full weight—full number of plies—and will give greater mileage than ever.

Naturally the demand for Kellys is greater today than ever before—and constantly growing. If you would like to supply some of this demand in your locality write today for particulars of the Kelly franchise.



Kelly-Springfield Tire Co.

General Sales Dept.
250 West 57th St., New York



ZAPON
LEATHER CLOTH

The upholstery that is wear-proof

Send for samples showing the ZAPON brands—Muleskin, Broncho and Mustang—that are made especially for fine automobile upholstery and California Top Work

ZAPON LEATHER CLOTH COMPANY
200 Fifth Ave., New York
Branches: Detroit, Los Angeles

WE MAKE OLD ONES NEW
A B CO
CHICAGO ILL

The Sign of Service

Ahlberg Ground Bearings
for Any Type of
Automotive Equipment

Reduce the cost of upkeep by saving the original parts.

Ahlberg Ground Bearings are bearings which have been in actual service and after becoming worn have been repaired. This is done by regrinding the raceways to their original contour and inserting new oversize balls and our own perfected retainer.

Our twelve years' experience in specializing in the repair of worn bearings has taught us how to do this work in a way that enables us to guarantee satisfaction.

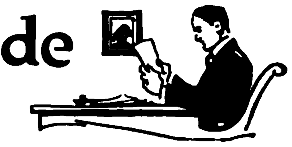
There are thirty-five direct factory owned branches maintained at convenient points to give you service.

Take your old bearings to our nearest branch and exchange them for Ahlberg Ground Bearings.

AHLBERG BEARING COMPANY
1708 So. Grand Avenue
LOS ANGELES, CALIFORNIA

Akron Fresno Oakland
Atlanta Boston Buffalo Baltimore Seattle Brooklyn
Cincinnati Cleveland St. Paul Columbus Dallas
Detroit Indianapolis Duluth Kansas City
Memphis Milwaukee Minneapolis Omaha Newark
New Orleans St. Louis New York Portland Oakland
Philadelphia Pittsburgh Providence San Francisco
Washington Toledo Youngstown

Western Trade Notes



Seattle, Wash.—Helix Piston Co., capitalized at $30,000, has been formed by P. T. O'Connor and F. A. Tutthill to manufacture Helix pistons. Michael Faessen and Fred E. Kimball have incorporated their piston and ring manufacturing business as Lexon Piston & Ring Co., capital stock $100,000

Napa, Cal.—Walter Lutge of Service Garage Co., has taken the Columbia car agency for Napa County.

San Francisco, Cal.—Wayne Oil Tank & Pump Co. has leased larger quarters at 4th and Perry Sts.—Milo Lite Co., capital stock $200,000, has been formed by H. L. Fedderson, Miles Caughrean, B. O. Selbach, E. Longwill, Louis Stocktmier, to manufacture searchlights and automobile spotlights.—L. G. Smith has been made manager of Homan & Merritt Auto Painting Co.—Pacific Heights Garage Co., capital stock $25,000, has been formed by A. Ortiz, E. Materne, J. E. Colsten.

Chico, Cal.—White Garage has been opened by Jacob Bertschinger in a fine new building, 5th and D Sts.—G. W. Kelly has taken over Oaks Garage and will add a tire sales agency.

Esparto, Cal.—Esparto Garage, headed by J. C. O'Neil and R S. Burke, has been made Ford and Fordson agency for the Capay Valley region.

Stockton, Cal.—Cutting & Lusignan, Maxwell and Franklin dealers, have moved into their new 2-story $35,000 building on California near Channel St.

Roseville, Cal.—J. Hawkins has sold his interest in the Dodge Brothers agency to his sons, Walter B. and Norman K., who will continue the agency as Hawkins Brothers; Langston & Hakl have bought the accessories sales department.

Berkeley, Cal.—F. H. Dailey Motor Co., Oakland, dealer for Maxwell and Chalmers cars, has opened a branch here, F. H. Fuller, manager.—Western Auto Supply Co. has opened a branch at 2426 Shattuck Ave.

Inglewood, Cal.—A. Sorko has opened a plant at 301 N. Commercial St. to manufacture Inglewood storage batteries.

Montebello, Cal.—Ernest M. Smith has taken over management of Whitson Garage, 2nd and Whittier Blvd.

Vaughn, N. M.—William Lewis and W. B. Bender have opened Lewis & Bender Auto Repair Co. on East Main St.

Miles City, Mont.—August E. Nergaard has bought G. M. Peterson's and Dick Johnston's interest in Parkview Garage.

Lewistown, Mont.—Musgrave Auto Berth Mfg. Co., manufacturing the Musgrave automobile camping bed, has been opened here by Harry Musgrave and associates.

Butte, Mont.—Carl Thisted Co., Inc., formerly with headquarters at Great Falls as state distributors of Republic trucks, has opened its head offices here, in charge of C. A. Carl, president, 351 S. Wyoming St.

Everett, Wash.—Moore's Repair Garage has been opened at 2928 Broadway by G. E. Moore.—Price Brothers, 3420 Everett Ave., have become statewide distributors and jobbers of Tungsten spark plugs and other Tungsten products.

Fullerton, Cal.—G. R. Jones Garage has been moved to larger quarters on West Wilshire Blvd.

El Monte, Cal.—Central Garage has been taken over by Charles J. Glasser and Joseph Classon.

San Gabriel, Cal.—Alick Barlow has opened East San Gabriel Garage.

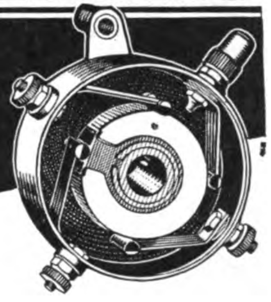
QUAKER CORDS
are Trusty Friends

Our New Selling Proposition will show you how to get volume sales.

QUAKER CITY RUBBER CO.
Factories: PHILADELPHIA
PHILADELPHIA 624-26-28 Market St.
CHICAGO 217-21 W. Huron St.
PITTSBURGH 30 E. Lacock St., N.S.
NEW YORK, 53 Murray St.
Pacific Coast Office: 304 Williams Building, San Francisco

U & J Ford Timers

$2.50



5 Times the Wear
Times the Sales

EVERY U & J Rotor Timer is **guaranteed** to outwear five ordinary timers and give a red-hot spark with perfect timing every mile of its life.

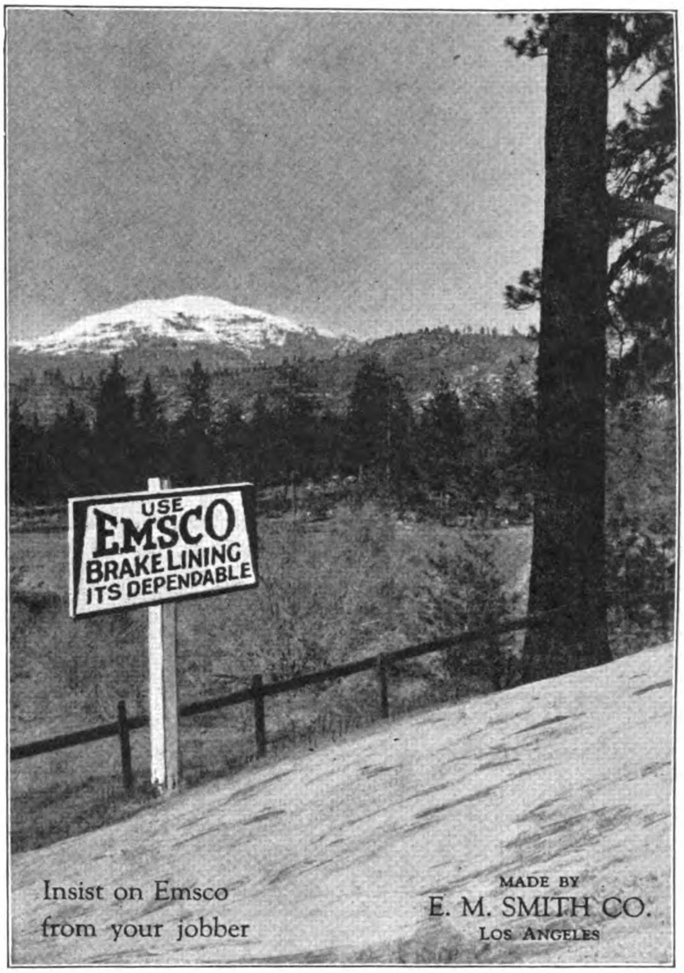
By the Rotor principle it gives a wipe contact of steel on steel that insures the hottest possible spark. Its simplicity and efficiency make the U & J Timer complaint-proof and trouble-proof.

Sold on **15 Day Trial—Money Back Guarantee** by dealers everywhere.

Write for illuustrated literature and terms.

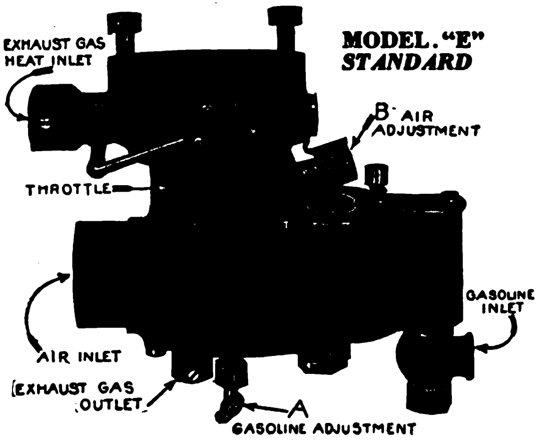
U & J CARBURETOR CO., CHICAGO
2847 South Halsted Street

The U & J Accelerator with its Adjustable Footrest and Guide, is the only practical foot-throttle applicable to all Ford motors.



Insist on Emsco from your jobber

MADE BY
E. M. SMITH CO.
LOS ANGELES



MARVEL CARBURETORS

GIVE

Universal Satisfaction

POWERFUL— ECONOMICAL— SIMPLE—

Write for our new Catalogue

MARVEL CARBURETOR CO.
FLINT, MICHIGAN, U. S. A.

Distributors:

Marvel Carburetor Sales Co.,
1837 So. Flower St.,
Los Angeles, Cal.

McAlpine & Schreiner
1520 Tenth Ave.,
Seattle, Wash.

Edwards-Warden Motor Parts Co.,
Salt Lake City, Utah

DENBY
MOTOR TRUCKS

REDUCED PRICES

Effective Jan. 1, 1922

	Was	Now
Model 31, ¾-1¼ ton Speedster	$1625	**$1485**
Model 33, 1½-2 ton	2300	**2145**
(Pneumatic tires used on above models)		
Model 34, 2 ton	2600	**2395**
Model 35, 2½-3 ton	....	**2795**
Model 27, 4 ton	4200	**3895**
Model 210, 5 ton	4850	**4295**
Model 214, 7 ton	5500	**4945**

F. O. B., Detroit, chassis with seat

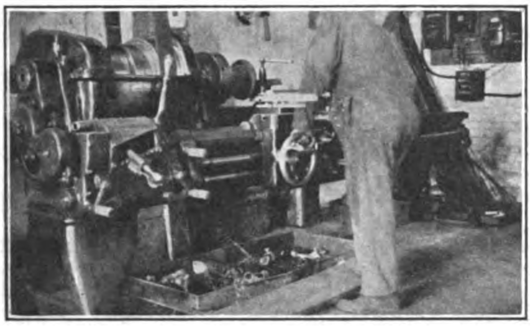
With rock bottom truck and service prices, the Denby line offers a very desirable factory connection to live dealers.

Write or wire for full details

LETS TALK BUSINESS AND GET BUSY

Denby Motor Truck Company
Detroit

MONEY MAKING MACHINERY



THIS AMERICAN LATHE
in the shops of Bozzani Bros., North Broadway, has made many a dollar for the firm.

Discriminating purchasers, who equip their shops with up to date tools, can be depended upon to do good work.

SMITH-BOOTH-USHER CO.

Machinery, Industrial and Construction Equipment Supplies

San Francisco
50-60 Fremont St.

Los Angeles
228 Central Ave.

Cletrac
REG. U.S. PAT. OFF
Cletrac
Cletrac

Model "F" $595

FARMERS like Cletrac F. They like its compact size, its sturdy construction, its low price. They recognize it as the farm tractor with an unequalled range of usefulness.

Cletrac Model F, together with the Cletrac Model W—a tractor for larger farms and all types of industrial uses—gives the dealer a *complete* tractor line, a double market and double profit possibilities. Write for "The Word of Men Who Know" and learn how dealers everywhere are making double profits in the double market of the Cletrac line.

THE CLEVELAND TRACTOR CO.

Largest Producers of Crawler Tractors in the World

19127 Euclid Avenue Cleveland, Ohio
Los Angeles, 1029 S. Grand Ave.
San Francisco, 147 New Montgomery St.
Spokane, 30 E. Sprague Ave.

Seattle, Wash.—Atkins & Rowan, Harvard Ave. and Pike St., headed by C. D. Atkins and D. H. Rowan, will distribute Sound tires in Seattle.—Robert S. Taylor, automobile engineer, and associates, have bought James Brennan's interest in Motor Parts Co., 817 E. Pike St., a leading crankshaft and cylinder grinding concern.—H. D. Newlee, former shop and service manager for Mitchell Motors & Service Co., has leased the repair department of Waterfront Garage, 83 University St. and will operate it as Waterfront Repair Co.—S. M. David has been made local branch manager for New York Lubricating Oil Co.

Tacoma, Wash.—Lincoln Battery Station, 38th and G Sts., has been opened by Jack McKee and Sherman Lyons, handling Gill batteries.

South Tacoma, Wash.—Dolge-Stoffer Co. have opened an automobile top, body, fender and radiator shop, 5640 Union Ave.

Marysville, Wash.—Marysville Motor Co., capitalized at $5000, has been formed by C. H. Wulff and C. T. Haines.

Dayton, Wash.—R. E. Dawe has bought the interest of H. C. Roush, his partner, in Ford Service Garage.

Portland, Ore.—Jack Tait, 4 years battery department manager of Covey Motor Car Co., has opened his own shop, 14th and Morrison Sts., specializing in Westinghouse batteries.—Bristow Cultivator Tractor Co. has been started by Claude S. Bristow, Floyd A. Mitchell and John Brulatour to manufacture the Bristow cultivator tractor, and already has orders for 2000 machines.

Eugene, Ore.—Lane County Auto Co., located with Fisk Motor Co. on 7th Ave., and headed by Clyde Fisk and Earl Fonda, will handle Durant and Franklin cars in Lane County.

Hood River, Ore.—W. S. Kaestner has become Durant and Star car dealer here.

Red Bluff, Cal.—K. I. Dutra, operating Walnut St. Vulcanizing Co., has bought Auto Tire Hospital from Harry B. Wiese.

Lakeport, Cal.—Harold D. Abercombie and Clarence R. Burriss have opened Enterprise Garage on Main St.

Vacaville, Cal.—Oscar Madson and A. Klotz have leased Nay Garage.

Roseville, Cal.—E. H. Horton and W. H. Luck have opened Superior Garage.

Sacramento, Cal.—Reo Motor Co. of California has opened a branch here, 1309 K St., Jerry R. Adair manager.

Petaluma, Cal.—J. J. King has leased a new building to be built with 2400 square feet floor space and will conduct an automobile repair shop.

Huntington Beach, Cal.—S. V. Smith has taken the Chevrolet agency, opening at 3rd and Walnut Sts.

Fullerton, Cal.—G. R. Jones, head of G. R. Jones Motor Co., has occupied the new Lilley Garage on West Wilshire St. which cost $23,000 to build and is one of the most strikingly modern garages in the districts east of Los Angeles.

Pomona, Cal.—W. E. Horne and J. F. Slagel have leased White Garage on East 2nd St. and have opened a Chevrolet agency.—P. S. Little has taken over the lathe repairing department of A. M. Littlepage Auto Repair Co. and will operate it as a separate business.—Clark Bros. Garage is having a new very attractive 2 story front, 60 feet long, built on its building, costing $8000.—J. W. Meyers has sold Meyers Oakland Service, official Oakland car service station on North Garey Ave., to Jones & Nicholson.

Orange, Cal.—Sisson Brothers have opened their garage in larger quarters in the former Stimson Bldg. on West Chapman Ave.

Fontana, Cal.—Fontana Service Co., handling automobiles and accessories, has been incorporated for $25,000 by H. C. Spring, Harry E. Spring and Harry Miller.

Motor Wheel
PRODUCTS

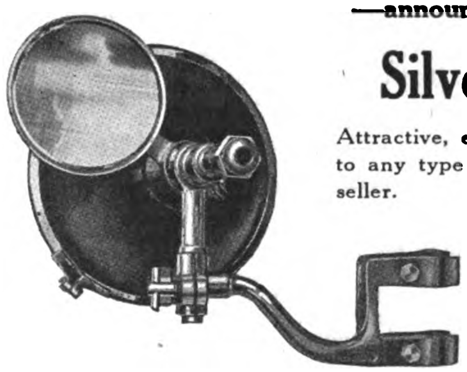
Gier Tuarc
Steel Wheels

Gier-Lewis
Steel Wheels

Gier Stampings

Wood Wheels for Cars and Trucks

MOTOR WHEEL CORPORATION • LANSING, MICHIGAN



—announcing the new closed car model

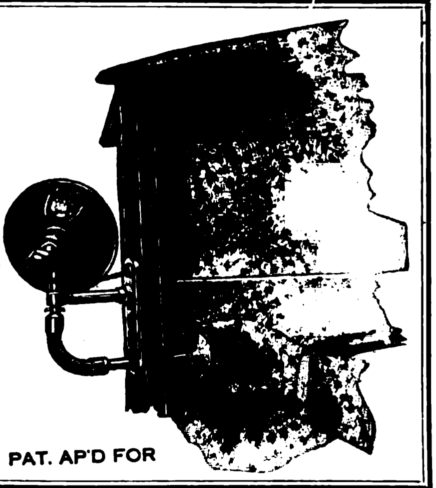
Silverbeam Spotlight

Attractive, easily operated, useful and ornamental to any type closed car. List price $10—a quick seller.

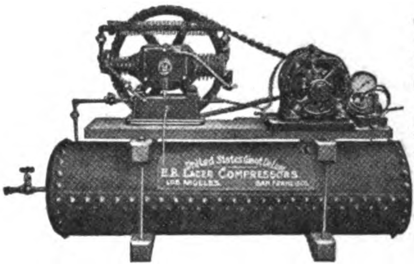
Jobbers and Dealers: We have a liberal proposition for you. Write today for full particulars.

Full Details on Request

Chas. Kaufmann & Sons, Inc.
Santa Ana Calif.



PAT. AP'D FOR



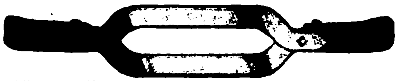
The same reliable U. S. Compressors.
Reliable 10 years ago.
More reliable Today.

Many copies appear in the market but only one original.
The best with patented features

E. B. LACER

Air Compressors
Los Angeles
1224 East 8th St.

Electric Motors
San Francisco, Cal.
401 Van Ness Ave.



The Widest Protective Face

New Era Duplex Bumper

"Senior" for Heavy Cars
"Junior" for Lighter Models
Approved by Underwriters Laboratories

There are three distinct improvements in DUPLEX "Senior" and "Junior" Bumpers. Distance between high and low faces has been increased, which makes it the very widest protective bar obtainable. The spring steel bars are much thicker. So are the attaching brackets. DUPLEX massiveness and beauty of design and finish are seen at a glance. Sells itself. Guaranteed. A good bumper to sell, a good one to put on a car. Write for Catalog.

NEW ERA SPRING & SPECIALTY CO.
73 Cottage Grove Ave. Grand Rapids, Mich.
GRAF SALES CO., Williams Bldg., San Francisco, Calif.

GRAMM PIONEER MOTOR TRUCK
LIMA, OHIO, U.S.A.

"The Recognized Standard of Quality"
A complete line from Speed Truck to 6 ton.
All attractively priced. Unusual selling features.
Strong dealer helps. Write for territory, discounts, etc.

THE GRAMM-BERNSTEIN MOTOR TRUCK CO.,
Lima, Ohio, U. S. A.

Do You Know the

STEPHENS

Salient Six

IT'S A GREAT CAR!

Now $1595 f. o. b. Freeport

STEPHENS MOTOR WORKS · FREEPORT, ILLINOIS

MORELAND MOTOR TRUCKS

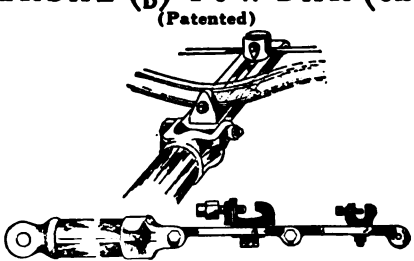
Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

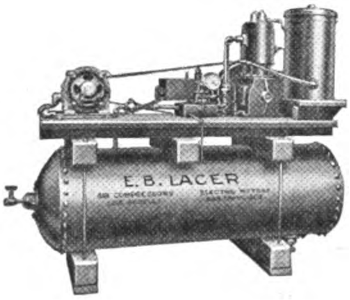
BEST FOR THE WEST

UNIVERSAL (RED) TOW-BAR (one man)
(Patented)



Attached to any make of car in a few minutes
Saves Time—Labor—Money
Buy now from your jobber—He has them

WALTER W. BIDDICK, DISTRIBUTOR
1318 South Figueroa Street, Los Angeles. Phone 23542



High Pressures Big Volumes

IS THE CALL TODAY

If it is Compressed Air 1 to 80 cu. ft. of air per min.

See E. B. LACER

Air Compressors — Electric Motors
Los Angeles — San Francisco, Cal.
1224 East 8th St. — 401 Van Ness Ave.

WANTED!

A Permanent Job on Your Ford Car

Applicants are the ARG Auxiliary Spring and the ARG Fender Braces. They come highly recommended by thousands of Ford owners for whom they have cut down depreciation, added to riding comfort and prolonged the car's life.

The ARG Auxiliary Spring is a combination front spring protector and shock absorber, costing only $4.00. ARG Fender Braces, either front or rear, cost $2.50 and definitely end fenders cutting tires and rattling. Put these competent, reliable accessories to work on your commercial or passenger car *today!*

Be sure to ask your dealer for ARG accessories by name. ARG accessories must make good or we will.

ARG AUXILIARY SPRING CO. *Mfrs.* Birmingham, Alabama

SOUTHERN ENGRAVING AND COLORTYPE CO.

Our Artisans and Equipment Rank Second to None West of Chicago

ALL WORK GUARANTEED

Photo Engravings

SOUTHERN ENGRAVING & COLORTYPE CO.
Phone 11046 LOS ANGELES 111 West 3rd

SCANDINAVIA

Trade Mark Registered in U. S. Patent Office.

BRAKE LINING FOR FORD CARS

SCANDINAVIA is woven from selected, long staple cotton on looms especially designed for FORD brake and transmission lining. Weighs 25 to 35 per cent more than other linings—which means more yarn, more body and more actual value.

Send for illustrated booklet and our Attractive Jobber or Dealer Proposition

SCANDINAVIA BELTING CO.
106-108 Reade St., New York City
Branches—Atlanta, Cleveland, Los Angeles, Portland, Boston, Chicago, Easton, Pa., Pittsburgh, San Francisco

Oakland, Cal.—Merrill C. Smith, former Willard branch manager at Minneapolis, has been made service manager for Auto Electric Service Co., Willard battery agency for Alameda County.—Snyder Bros. Garage has been forced to move into larger quarters, 3118-24 San Pablo Ave.

Palo Alto, Cal.—Times Garage on Hamilton St. has been bought by H. H. Rodehouse and John C. Vincent.

Watsonville, Cal.—L. Fergoda, Hupmobile sales and service agent, has located temporarily at 632 Main St. pending completion of new quarters he has leased on the opposite of the street.

San Luis Obispo, Cal.—Forrest E. Brown has moved his Franklin and Durant agency to larger quarters, 855 Higuera St.

Ventura, Cal.—W. L. Magby has taken over Ventura Garage, while retaining his former business, Magby Garage.

Stockton, Cal.—Reo Motor Car Co. of California has opened a branch, headed by Arthur M. Hammond and Leslie Murray, Miner Ave. and El Dorado St., to handle Reo car and truck sales in San Joaquin, Amador, Calaveras, Tuolumne, and part of Stanislaus Counties.

Clovis, Cal.—Bonniewell & Bandy have taken over Service Garage, 3rd and Fulton Sts.

Fresno, Cal.—Bob Murden, temporarily located at 1228 Van Ness Ave., has taken the Rickenbacker agency for Fresno County.

Visalia, Cal.—C. M. Burnett has bought the interest of Lee E. Bigler, his partner, in Automotive Supply Co.

Tracy, Cal.—Mark Nesing has resigned as manager of West Side Garage on Central Ave. and it has been taken over by the owners, John B. Prendegast and J. Levand.

Taft, Cal.—Midway Battery & Tire Co., 308 Center St., has been opened by M. R. Ferguson.

Bakersfield, Cal.—Glennville Garage has been opened by Wilkes Brothers on Summit Ave.

Los Angeles, Cal.—H. V. Gilbert and H. C. Illo have bought Slauson Ave. Garage, Slauson Ave. and Pacific Blvd.—Liberty Rubber Co., headed by Charles E. Bayless, is erecting a 2 story building, Los Angeles and 11th Sts., for its growing business.

El Segundo, Cal.—Turner Brothers, located in El Segundo Garage, have become Ford and Fordson agents.

Highland Park, Cal.—Goodwin & Yates, operating Quality Service Station, are having a brick garage with 3000 square feet floor space erected for their repair department.

Use Motor West

❡ Every Eastern automobile or accessory manufacturer can help his Pacific Coast representative increase his sales by a liberal use of the advertising columns of MOTOR WEST.

❡ Coast dealers and factory representatives should insist on the factory folks giving them the same advertising support in "The Motoring Authority of the Pacific Coast" as is accorded the Eastern and Middle Western dealers and representatives in the motor trade journals published and circulating almost exclusively in those sections. Otherwise the dealers and representatives here, who pay their proportionate share of the expense of advertising in the Eastern and Middle Western journals (and incidentally receiving very little benefit from it) are paying for something they do not get.

THINK IT OVER!

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

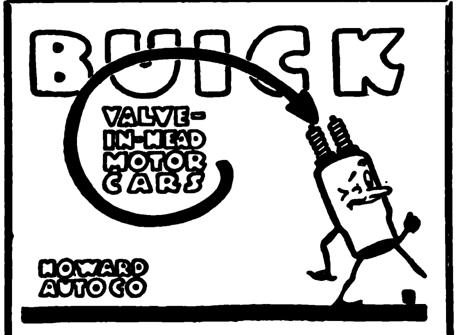
PISTON RINGS PISTON RINGS

OIL KONTROL
PATENT APPLIED FOR.
RINGS
CONTROL the OIL CONTROL your TRADE
QUALITY Largest Profit RELIABILITY
All distributors for the genuine and original OIL KONTROL Piston Rings are appointed direct from the factory. Samples furnished jobbers and distributors
SUNSET MANUFACTURING CO., 1328 East Sixth Street
Los Angeles, California

SPRINGS

CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS
"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof
FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
Pacific Coast Distributors
Madison "Oil Kipps"
Main 3733. 916 So. Los Angeles St.

AUTOMOBILES



1323 S. Flower St. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

HARWARD
ONE PIECE
HIGH POWER PISTON RING

A LIFE SAVER FOR REPAIR MEN
Used by the fastest racing drivers on the track. Very liberal discount to the trade. Write for literature, prices, free samples and sales proposition.
MEISENHEIMER & SMITH
Distributors for So. Calif. and Arizona
619 W. 10th St., Los Angeles, Calif.

CYLINDER SCOREFILLER

SCORED CYLINDERS
In auto and all internal combustion engines can be repaired easily and permanently without heating or machining with STAR BRAND SCOREFILLER. The Scientific Synthetic Gritless metal cement. Hundreds of satisfied users. Guaranteed. $3.50 per box. Postpaid.
BRADY-ADAIR COMPANY
Distributors
574 Golden Gate San Francisco

On M. and A. M. A. Ad. Council.

M. L. Heminway, general manager of Motor and Accessory Manufacturers Association, announces the appointment of Maurice Switzer, vice president of Kelly-Springfield Tire Co., as a member of the executive committee of the association's advertising managers' council.

More than one hundred publicity and merchandising executives of companies affiliated with the association are now active members of the council. Representatives of many of the other 300 companies constituting the association's membership are expected to join as the council's work progresses.

Briefly, the object of the council is to increase the business-producing efficiency of the advertising dollar—by stimulating discussion, by organizing data of direct value, and by concentrating entirely on the advertising and merchandising problems of the automotive industry, especially from the standpoint of the parts and accessory manufacturers. On the basis of total appropriation in all branches of local, international, and national advertising, the council represents one of the largest groups of advertisers in America.

The council is administered through the educational department at the association's headquarters, under the direction of an executive committee and the manager of that department, who acts as secretary of the council and its executive committee.

The present makeup of the committee is: E. W. Clark, (chairman), advertising manager Clark Equipment Co., Buchanan, Mich; J. C. McQuiston, manager department of publicity, Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.; S. E. Baldwin, advertising manager Willard Storage Battery Co., Cleveland; Joseph S. Jacobs, advertising manager American Hammered Piston Ring Co., Baltimore; Maurice Switzer, vice president Kelly-Springfield Tire Co., New York City; M. Lincoln Schuster (secretary), manager educational department, M. & A. M. A., New York City.

Mr. Switzer has had broad and extensive advertising experience, and in addition is a well known writer and editor. He went to New York in 1900 as advertising manager of the Havana-American Co., now a subsidiary of the American Tobacco Company. He joined Wilson Distilling Co., which later became distributor for White Rock Mineral Springs Co., taking charge of publicity for both Wilson and White Rock, and eventually became an officer and director of the Wilson Co. He remained with that company ten years and was responsible for the popularity of "Wilson—That's All!" After two years as writer and editor for the Leslie-Judge Co., Mr. Switzer joined Kelly-Springfield Tire Co. in 1914, to organize the advertising department. He became vice president in 1917.

Among the books written by Mr. Switzer are "Wild and Tame Advertising," "Who Pays the Advertising Bills?", "Letters of a Self-Made Failure", "Satire and Song" (verse), "Cashing In On What You've Got" and "Trying It on the Dog."

* * *

Templar's Slate Is Clean.

Templar Motors, Cleveland, is now out of the hands of the committee of creditors who agreed to a settlement for 66⅔ per cent of the whole. The company is preparing for increased production and in sales force. It has started again with a clean slate.

* * *

A Los Angeles Chinaman delivers his packages in a Cadillac.

Are You Selling Twice As Many Tires As You Did Last Year?

Most Ajax dealers are.

Demand for Ajax Tires is more than twice as great as in 1921—120% greater to be exact.

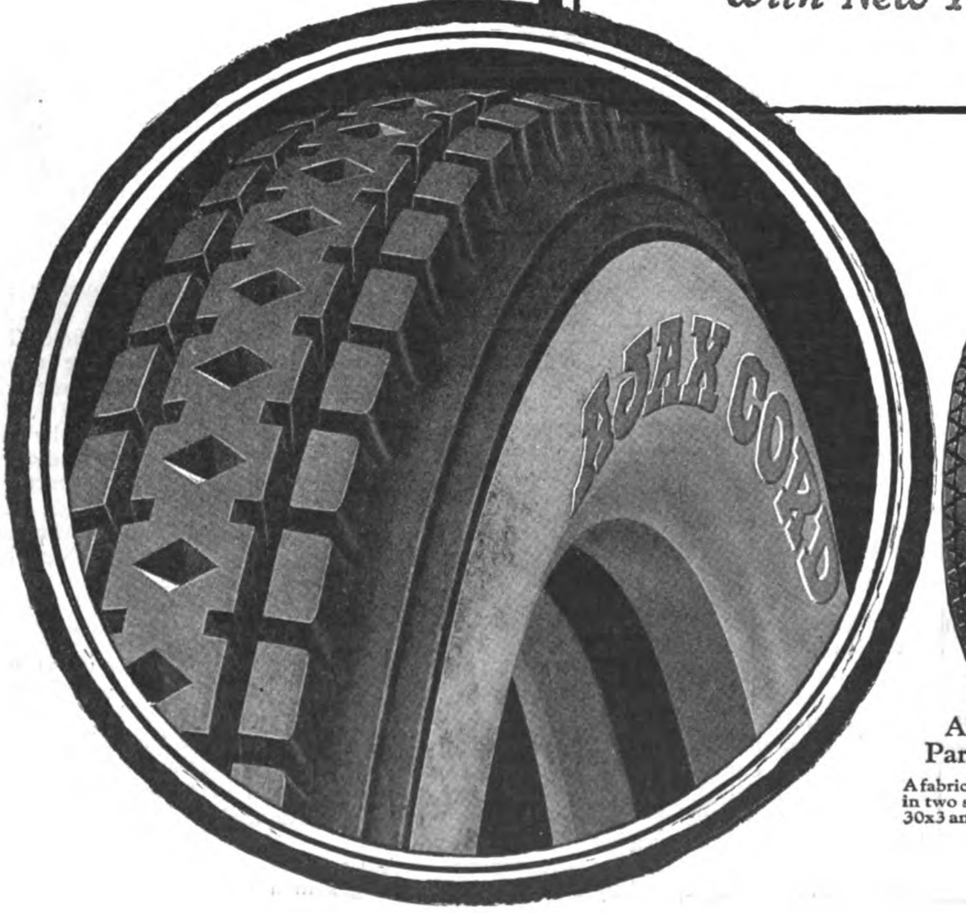
Stability of the Ajax policy is unhesitatingly endorsed by Ajax dealers. You need no daily bulletin to know Ajax prices or policy. Policy is always sound; prices competitive. Product of the highest quality.

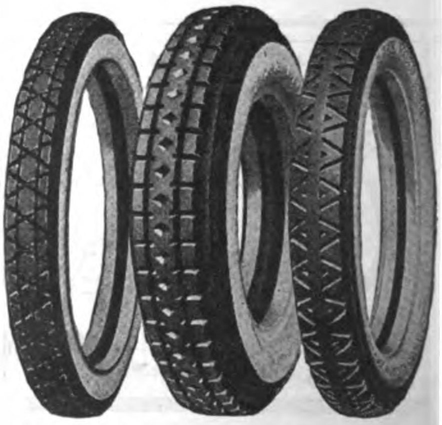
The Ajax Dealers Franchise is more valuable than ever.

Write

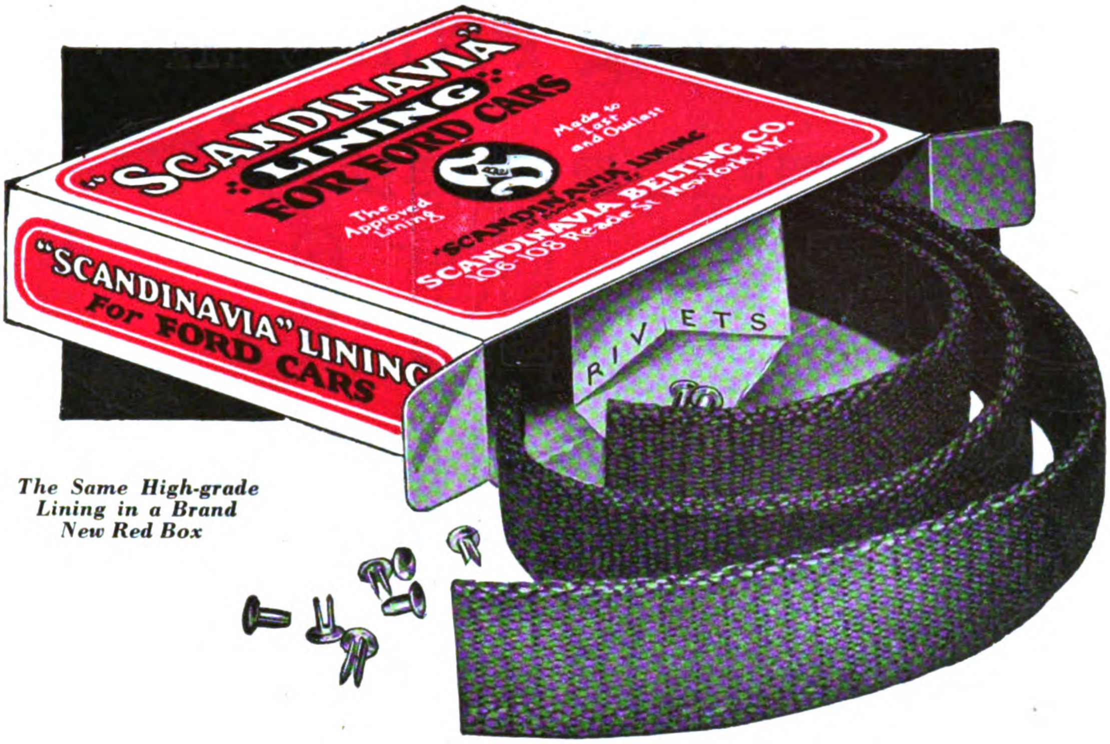
AJAX RUBBER COMPANY, Inc.
New York City
Branches in Leading Cities

AJAX CORD TIRES
With New Features





Ajax Paragon	Ajax Truck Tire	Ajax Road King
A fabric tire made in two sizes only: 30x3 and 30x3½.	A burly pneumatic cord tire for heavy service.	A famous fabric tire of exceptionally high quality.


"SCANDINAVIA" LINING FOR FORD CARS
The Approved Lining
Made to Last and Outlast
"SCANDINAVIA" LINING
SCANDINAVIA BELTING CO. 106-108 Reade St. New York, N.Y.
"SCANDINAVIA" LINING For FORD CARS
RIVETS

The Same High-grade Lining in a Brand New Red Box

Scandinavia Brake Lining
is Made Especially for Ford Cars

SCANDINAVIA has become the accepted lining for FORDS, because it has proven itself to be a lining that will deliver 100% service during a long life of hard usage.

Woven from selected, long staple Southern cotton on looms especially designed for FORD brake and transmission lining. SCANDINAVIA weighs 25 to 35 per cent more than other linings—which means *more yarn, more body* and *more actual value.* Especially impregnated, processed and hardened (to resist heat, oil and grit and yet remain sufficiently pliable) to prevent chattering or glazing.

SCANDINAVIA is put up in convenient boxes with the necessary solid brass rivets for fastening to the bands. Cut into three equal-length pieces for Low and High Speed, Reverse and Brake Bands.

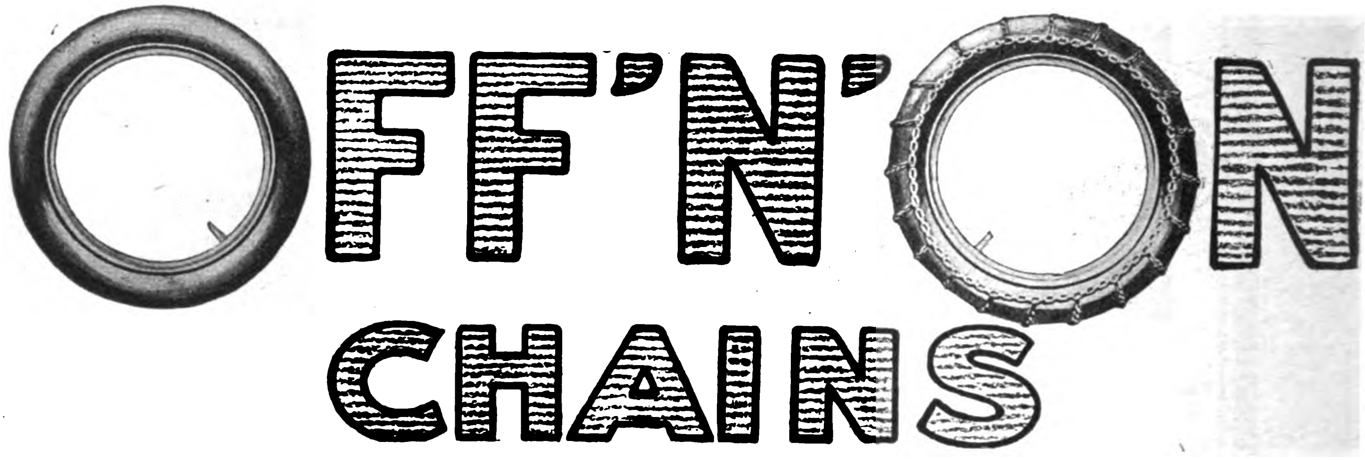
Write for Our New Folder "How to Change Ford Brake and Transmission Linings." We Have an Attractive Proposition for Jobbers and Dealers.

SCANDINAVIA BELTING CO.
106-108 Reade St., New York, N. Y.

BRANCHES:

Atlanta	**Boston**	**Chicago**	**Cleveland**
Easton, Pa.	**Los Angeles**	**Pittsburgh**	**Portland, Ore.**

Growing Profits in



There will be a growing use of OFF'N'ON Chains for these two reasons:

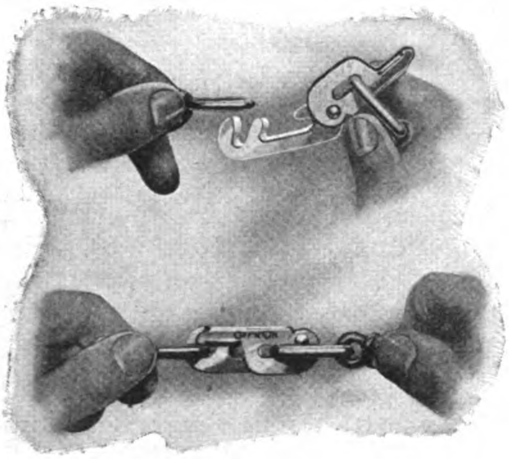
The Positive Lock

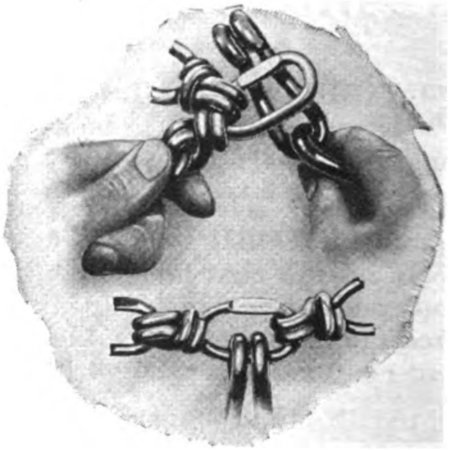
This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No more lost chains—no more loose chains.

The Slip-On Link

This patented slip-on link makes it easy to take off the old cross chain and put on a new one.

A child can do it. Yet they cost no more.





The growing use of these chains means that profits to dealers will multiply.

Get in on this profit maker now. Order today from your jobber. Buy spare cross chains because you can sell a set of extra cross links with every chain.

Write us for circular and price list, giving the name of your jobber

PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers 520 Belmont Ave., Newark, N. J.

Branches:
CHICAGO—17 So. Jefferson Street
ATLANTA—24 Nassau Street
KANSAS CITY—1712 Grand Avenue
SAN FRANCISCO—977 Mission Street

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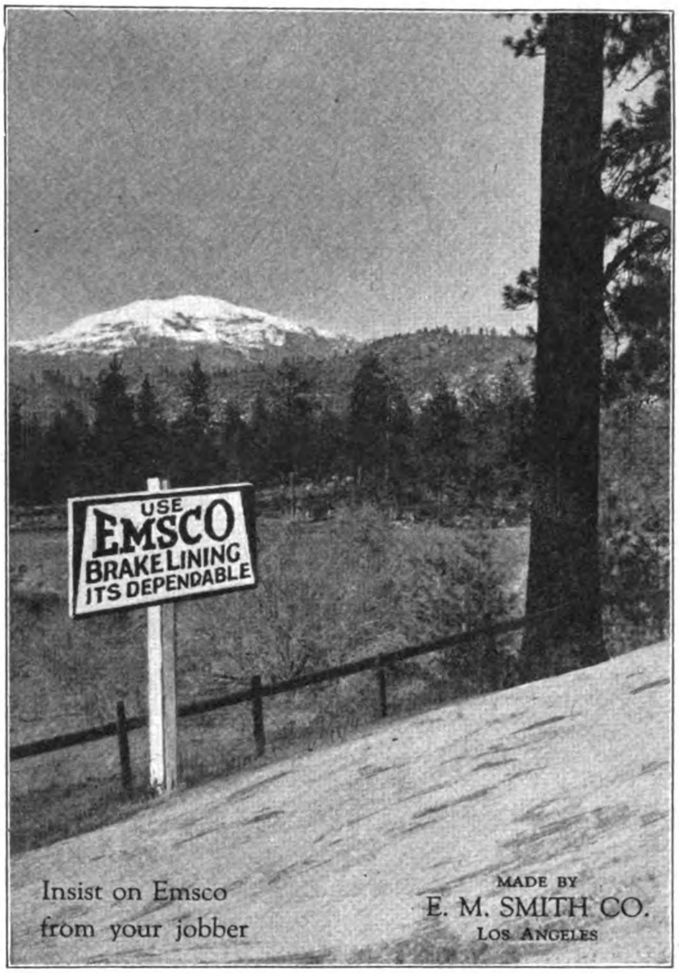
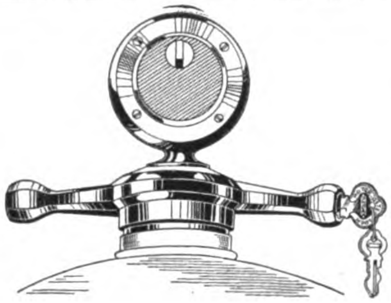




Fletcher
Motor-Meter Lock

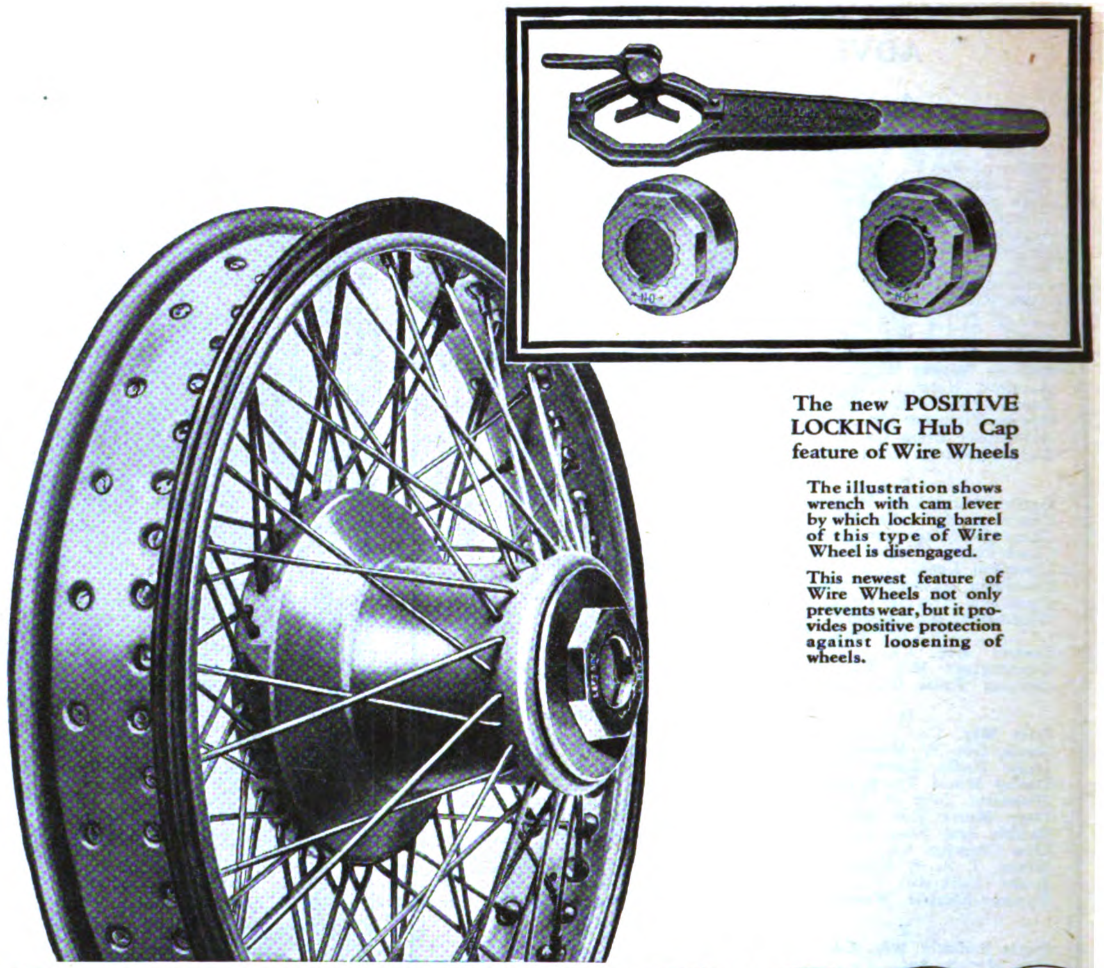
The fastest selling Radiator Cap Lock on the market. It sells because it is the only absolutely thief proof lock.

A liberal proposition for accessory and motor car dealers.

Ask about it from your regular jobber or get in touch with us direct.

Harry F. Joy & Co.,
1311 S. Figueroa St., Los Angeles
C. H. Diehl Specialty Co.,
612 Van Ness Ave., San Francisco
Alemite Lubricator Co.
10th & Oak Sts. Portland
312 E. Pike St. Seattle
1229 W. Sprague, Spokane

Distributors Fletcher Motor-Meter Locks



The new POSITIVE LOCKING Hub Cap feature of Wire Wheels

The illustration shows wrench with cam lever by which locking barrel of this type of Wire Wheel is disengaged.

This newest feature of Wire Wheels not only prevents wear, but it provides positive protection against loosening of wheels.

WIRE WHEELS

—and why they are a good investment

The foremost builders of high-grade cars, such as Rolls-Royce, Packard, Marmon, Cadillac, etc., know that Wire Wheels are a good investment. They KNOW that Wire Wheels not only add smartness and distinction to the appearance of a car but they also are a good investment because:

—they improve the easy-riding qualities of the car;

—they rob tire-trouble of its terrors and, therefore, increase the pleasures of motoring;

—they increase tire mileage and, as a result, save money for the owner;

—they provide additional safety for the passengers, due to the strength of the triple rows of spokes.

WIRE WHEEL CORPORATION OF AMERICA
1700 Elmwood Ave., Buffalo, N. Y.

Direct Factory Branches and Service Stations:

New York—835 11th Ave. at 57th St.
Philadelphia—328 North Broad St.
Chicago—2900 So. Michigan Ave.
Detroit—433 Leland Street
Los Angeles—1216 So. Grand Ave.
San Francisco—1690 Pine St.

five wheels, triple spoke, detachable at hub

Transport's Messages in National Magazines Are Reaching Millions

Think how many prospective truck buyers in your territory are reached, and influenced, by the Transport Truck Company's National Advertising Campaign—the AMERICAN MAGAZINE, with its 1,800,000 circulation and LITERARY DIGEST with its 1,500,000.

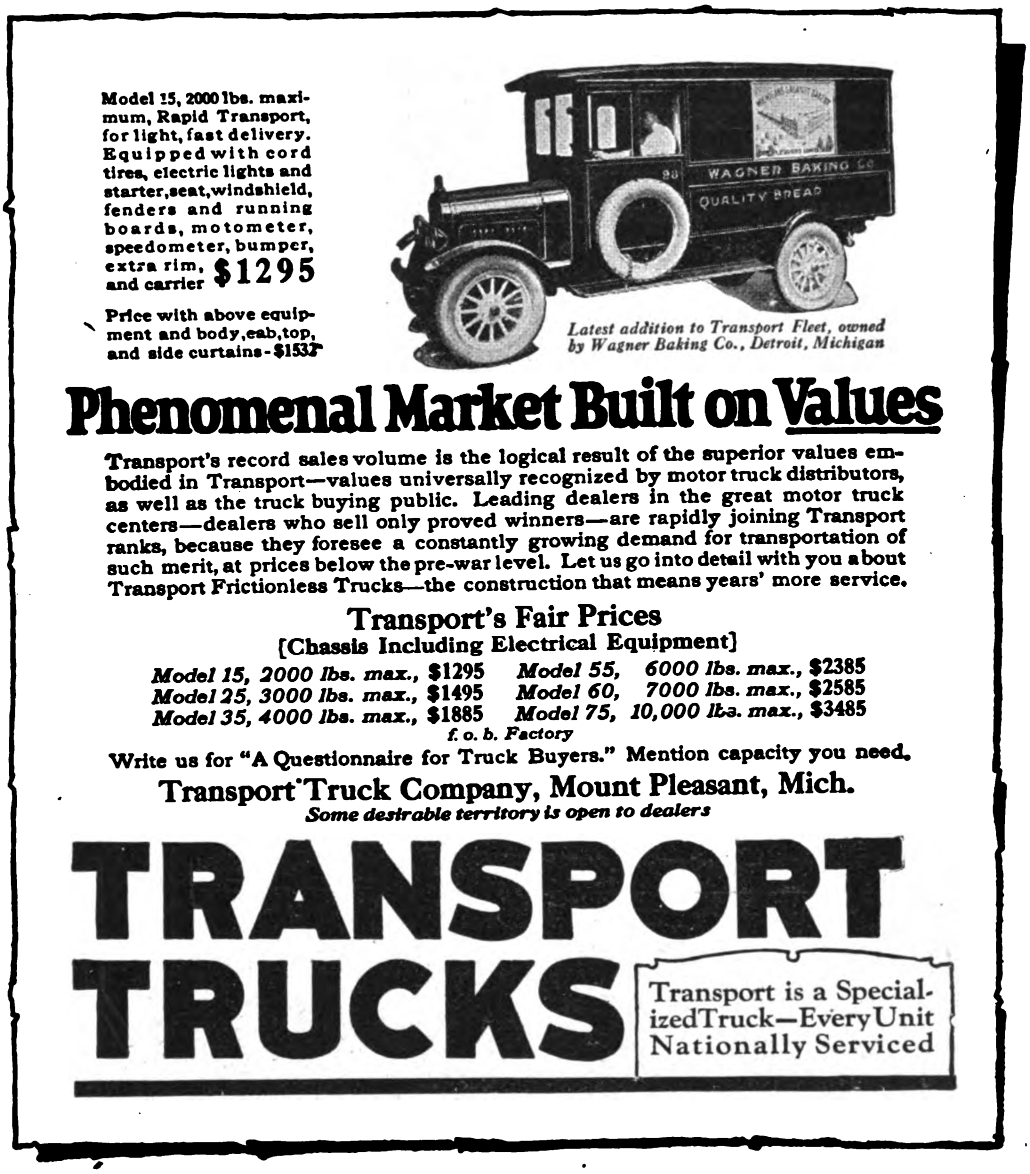
The vigorous response to this campaign indicates the unsurpassed sales possibilities which the Transport complete line, at prices below the pre-war level, offers. Dealers of the first rank in all sections are tying to Transport. They find it a sales-maker—a prestige-builder—a profitable merchandising line from every angle.

Ask for booklet containing our "Questionnaire for Truck Buyers," with answers. This explains in detail the remarkable values you offer with the Transport line.

Transport Truck Company
Mount Pleasant, Michigan

Northwest Transport Truck Co.,
510 Railroad Ave.,
Spokane, Wash.
D. F. Poyer & Son,
324 E. Sixth St.,
Los Angeles, Calif.,
D. G. Westbrook,
364 Hayes St.,
San Francisco, Calif.

Reproduction from a series of Transport Advertisements appearing in National Publications headed by American Magazine and Literary Digest



Model 15, 2000 lbs. maximum, Rapid Transport, for light, fast delivery. Equipped with cord tires, electric lights and starter, seat, windshield, fenders and running boards, motometer, speedometer, bumper, extra rim, and carrier $1295

Price with above equipment and body, cab, top, and side curtains - $1532

Latest addition to Transport Fleet, owned by Wagner Baking Co., Detroit, Michigan

Phenomenal Market Built on Values

Transport's record sales volume is the logical result of the superior values embodied in Transport—values universally recognized by motor truck distributors, as well as the truck buying public. Leading dealers in the great motor truck centers—dealers who sell only proved winners—are rapidly joining Transport ranks, because they foresee a constantly growing demand for transportation of such merit, at prices below the pre-war level. Let us go into detail with you about Transport Frictionless Trucks—the construction that means years' more service.

Transport's Fair Prices

[Chassis Including Electrical Equipment]

Model 15, 2000 lbs. max.,	$1295	*Model 55, 6000 lbs. max.,*	$2385
Model 25, 3000 lbs. max.,	$1495	*Model 60, 7000 lbs. max.,*	$2585
Model 35, 4000 lbs. max.,	$1885	*Model 75, 10,000 lbs. max.,*	$3485

f. o. b. Factory

Write us for "A Questionnaire for Truck Buyers." Mention capacity you need.

Transport Truck Company, Mount Pleasant, Mich.

Some desirable territory is open to dealers

TRANSPORT TRUCKS

Transport is a Specialized Truck—Every Unit Nationally Serviced

TRANSPORT TRUCKS

Specialized Trucks-
Every Unit
Nationally Serviced

Prest-O-Plates are establishing new ideals of a battery, and new standards of battery service for car owners.

The reason is clear. The life of a battery is in the plates. Prest-O-Plates last to a fine old age. A matchless combination of hardness, and porosity, they possess heat-resisting sturdiness in hottest summer,—and ready reserve power in freezing winter. Therefore Prest-O-Plates make Prest-O-Lite the long distance best all-around, all-weather battery.

To Dealers: We have a *better* battery proposition—more profit for you—more and better satisfied customers. Write us.

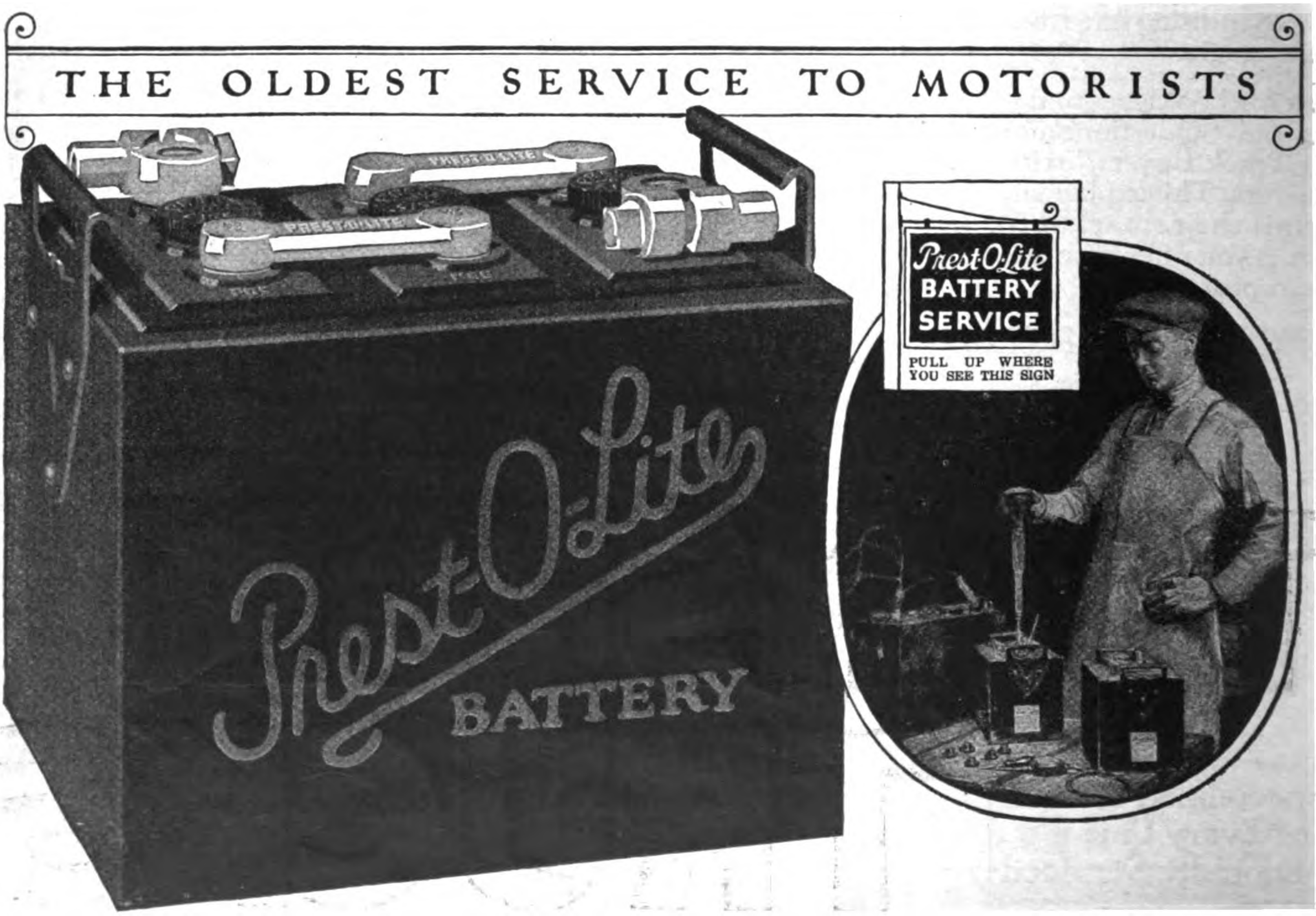
To Battery Service Stations: Are you making money? Many Prest-O-Lite Battery Distributors have our valuable gas and appliance franchise—*two* profitable lines. Write us for particulars.

To Responsible Business Men: Do you need another profitable line to make a satisfactory profit? You may be qualified to represent us. If you are looking for a permanent profitable business in which to invest your money and energy, here is your opportunity.

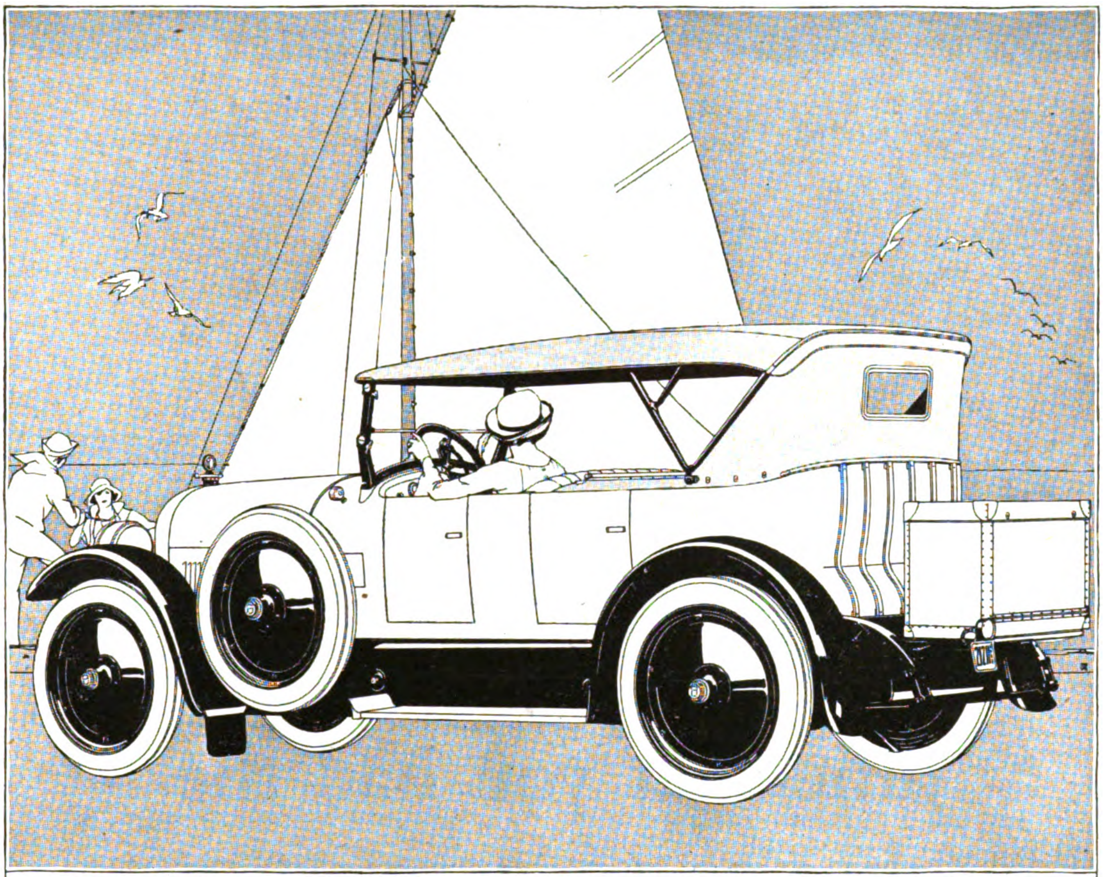
Write us for open territory.

THE PREST-O-LITE COMPANY, Inc.
Eighth and Brannan Streets, San Francisco, California

Main Office: 30 East 42nd Street, New York In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto


THE OLDEST SERVICE TO MOTORISTS
Prest-O-Lite
BATTERY
Prest-O-Lite
BATTERY
SERVICE
PULL UP WHERE YOU SEE THIS SIGN

BEAUTY • STRENGTH • POWER • COMFORT



THE NEW IMPROVED FOUR PASSENGER

HAYNES 75 TOURISTER

For those who desire a car for touring which is dependable in power and impressively proportioned, and yet wish the seating to be conversationally convenient, Haynes engineers and designers have evolved the new, improved, four-door, four-passenger Haynes 75 Tourister.

The whole car is correctly eloquent of smartness, from its new design, searchlight type head lamps to the serviceable trunk carried at the rear. The slope of the windshield, the three-quarter length running boards, the spare tires riding beside the commanding hood, the trim, ebonized handles of the four convenient doors, the stylishly French-plaited leather upholstery over deep, resilient cushions, every detail appeals to those who appreciate discriminative completeness.

Like all Haynes 75 models, the Tourister has the pick-up, the get-away, the steady, trustworthy, quiet power, which is the gift of Haynes manufacturing experience, in the famous, Haynes-built six cylinder 75 motor.

No wonder Haynes dealers are having such a great volume of requests for this Tourister. Valuable territories are still open to well qualified dealers. Communications are held in confidence.

In writing or wiring, address Department 949.

$2395

F. O. B. FACTORY

Cord tires and wooden wheels are standard equipment on all six cylinder Haynes 75 models. The Haynes 75 Blue Ribbon Speedster has cord tires and six wire wheels as standard equipment. ***Disc wheels are optional at no extra charge.*** *All models except the Speedster, equipped with six wire wheels, prices on application*

THE HAYNES AUTOMOBILE COMPANY, *Kokomo, Ind.* Export Office, 1715 Broadway, New York City, U.S.A.

© 1922, by T. H. A. Co.

1893 • THE HAYNES IS AMERICA'S FIRST CAR • 1922

Do not let it be said of you at some future time that you had the chance to acquire a Stutz dealer franchise and did not avail yourself of the opportunity.

THE CAR THAT MADE
STUTZ
GOOD IN A DAY

The Franchise With a Future

As a result of recent developments, the Stutz now occupies an even more commanding position in the motor car industry than it did before.

But what has happened is only an indication of what the future holds in store.

Stutz—with its unlimited financial and industrial resources—has taken advantage of every scientific method of meeting present conditions with a product that is unquestionably the most remarkable value ever offered by the company.

The recent big reduction in prices—with full protection to the dealers on all new and unused cars on hand at the time—is just one of many steps taken to make the Stutz product the most attractive value in its class and the Stutz franchise the outstanding selling privilege in the field.

Dealers with vision who acquire the Stutz franchise now will reap the benefits of their foresight in the augmented possibilities for profit which the near future will bring.

Only rarely does such an opportunity as this present itself in the motor car business. There is no time like the present to take advantage of it. Write or wire for particulars.

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

Firestone Offers Price *but* Emphasizes Quality

WHILE enabling Firestone dealers to meet all legitimate price competition, Firestone has achieved a greater and more permanent benefit for the retail tire merchants by bettering the quality of the product and the merchandising service.

This sound policy has enabled Firestone dealers to surpass all previous sales records in recent months. It is responsible for the notable swing into definite and outstanding leadership this season that has attracted widespread attention and favorable comment.

"Firestone Cord"

Firestone

Most Miles *per* Dollar

Newspaper Advertisement Appearing in 44 Principal American Cities

No Cut in Stephens Price *or* Quality

PRICE reductions have been the main feature of the advertising and selling efforts of several automobile companies in the last ten days. Naturally we have received many inquiries from owners, dealers and prospective buyers as to our policy on Stephens prices.

Our policy is fixed. Stephens prices will not be cut until motor cars of Stephens quality can be manufactured, through lower labor and material costs, for less money.

Our profit is fair—one that any honest manufacturer is entitled to and must have.

Every man and woman who has learned by experience that price is not the chief consideration in the purchase of any article of value—or a safe way ever to measure value—will understand and approve this position.

Stephens motor cars are *manufactured* in limited numbers by a hand-picked organization of engineers, mechanics and expert body builders. Every precision method and factory economy which can be used in the production of a high-grade motor car is employed.

None but the best materials are used. They are forged, machined, fitted and tested with a care and fine craftsmanship unknown today except on a few high-grade motor cars.

Of the units not manufactured by Stephens—Timken axles, Fedders radiators, Gemmer steering gears and controls, full alloy springs—each is of a type and quality found in no other car in the Stephens price group.

With all the current price cuts, therefore, the Stephens stands out — by comparison, by performance, by the experience of 20,000 owners—as the surpassing dollar value today among motor cars. We know this. We are ready to prove it by test or in competition with any other motor car in our price class.

If you are more interested in saving one or two hundred dollars than in securing lasting, dependable, luxurious transportation; high resale value; constant satisfaction and the assurance that the organization behind your motor car will continue in business—you should buy "cut price," not a Stephens.

Yet it has always been a Stephens policy that car prices shall keep step with labor and materials. Within two years, as costs could be lowered, the price of the Stephens touring car has been reduced $805, with proportional reductions on other models. No unit in any Stephens was cheapened, however, or any less care devoted to manufacture or finish.

Stephens standards will not be lowered. You cannot buy a Stephens, now or later, which does not measure up to these standards—which is not just as good a motor car of its type as we can design and build.

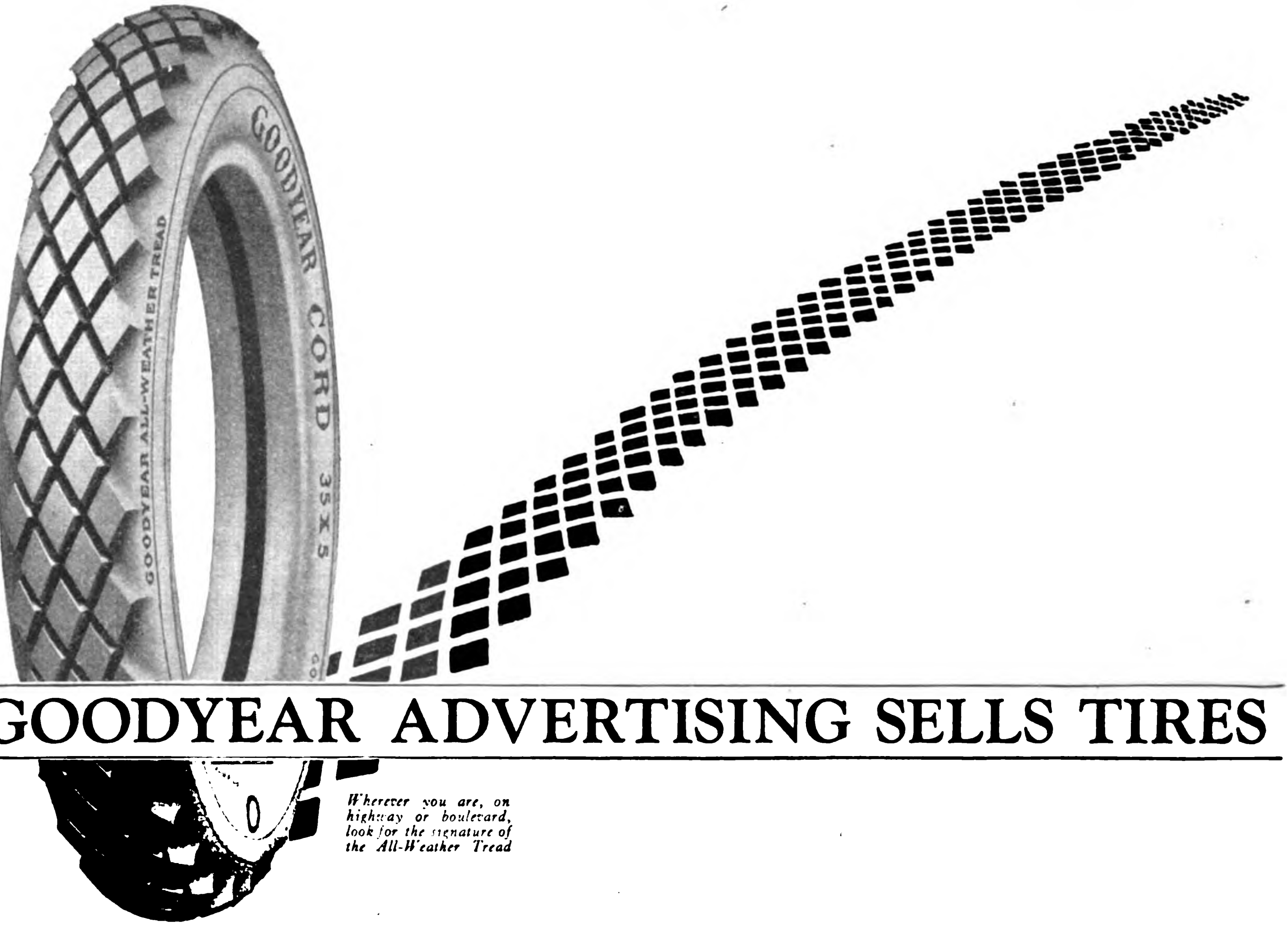
We want volume, yes—but not by sacrifice of quality.

George N. Peek
PRESIDENT

STEPHENS MOTOR CAR COMPANY, Inc., *Moline and Freeport, Ill.*

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport
Your territory may be open. Write for our contract terms



GOODYEAR ADVERTISING SELLS TIRES

Wherever you are, on highway or boulevard, look for the signature of the All-Weather Tread

Behind all Goodyear Dealers is an untiring, powerful force that is working day and night, year after year, to help sell Goodyear Tires. It is Goodyear Advertising.

No matter where motorists live, no matter where they may travel, Goodyear Advertising is continually reminding them of Goodyear quality and the Goodyear Dealer.

No matter where the Goodyear Service Station may be, in crowded city street or on country road, its sign is recognized instantly as a symbol of tire quality, honest price, and good service.

The Goodyear Dealer is known. He is trusted. And his full line of Goodyear Tires enables him to meet the needs and price of any car owner. More and more car owners come to him when they need new tires, for Goodyear quality keeps him his old customers and Goodyear Advertising brings him new ones.

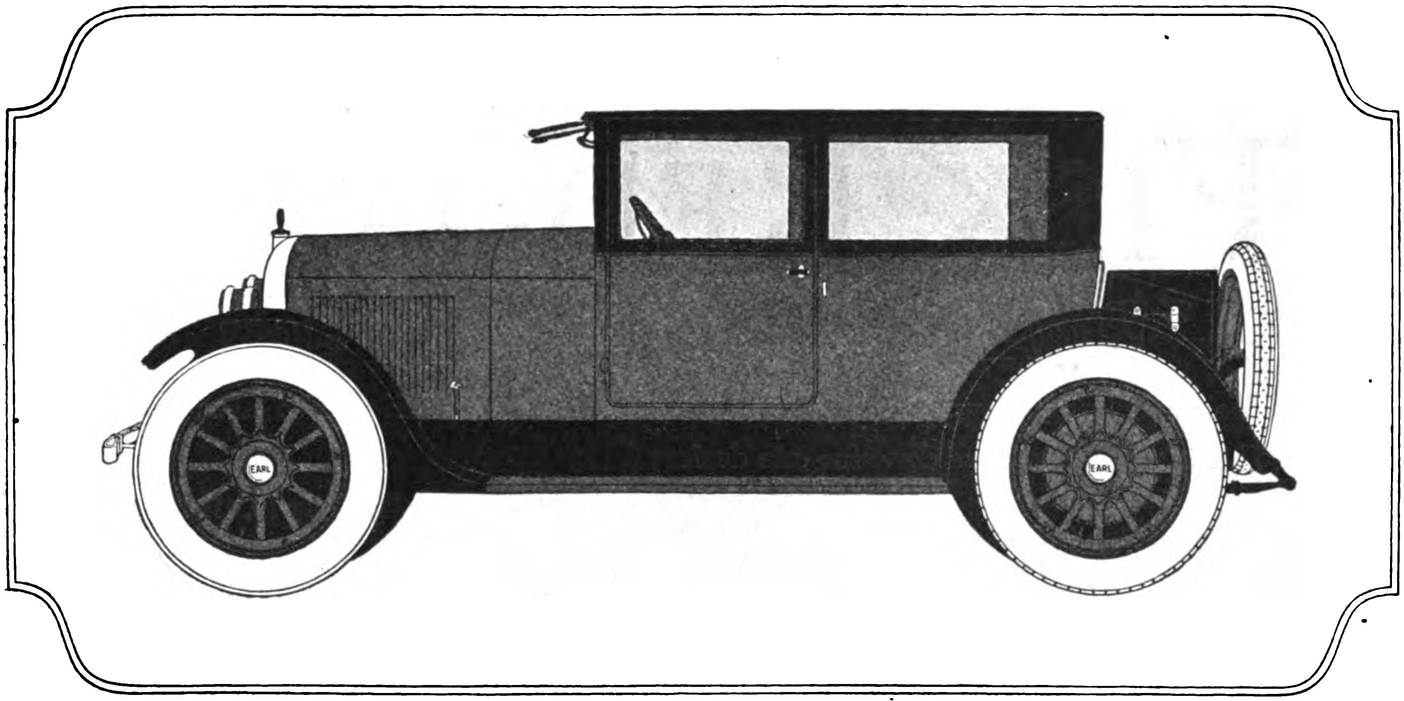
This same effective force works for the motor car dealer who sells Goodyears. Goodyear Tires upon an automobile are proof that the man and company behind that car are desirous of providing the owner with economical operation.

If you want to be a Goodyear Service Station and enjoy the profitable assistance of Goodyear Advertising, write today to Goodyear, Akron, Ohio, or Los Angeles, California.

Goodyear Means Good Wear

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.



COMPLETE EQUIPMENT INCLUDED IN CABRIOLE PRICE, $1395—TRUNK, BUMPER, MOTOMETER, SUN VISOR, ETC.

Two Big Markets for EARL *Cabriole*

Distinction and equipment strike business and professional men as well as women

JUDGED by retail sales, the Earl *Cabriole*—completely equipped for $1395—is proving almost as popular among business and professional men who need a *personal utility car* as among women drivers, to whom its distinction and ease of handling appeal so strongly.

The fact is physicians, architects, realtors and business executives have learned that the seating capacity of a coupe is too limited to meet the necessities of many important business and social occasions.

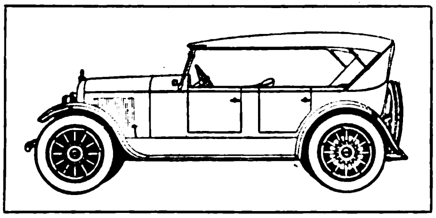
Here the Earl *Cabriole* serves as *two cars in one.* It seats four big men in comfort, with plenty of leg room. Yet its compact, close-coupled design, its sweeping lines and contours, make it *look right* when the owner is driving alone. And driving the *Cabriole* for either man or woman, is so easy that it's no task at all.

Cabriole buyers appreciate, too, its *complete equipment.* No other closed car embodying so much comfort, beauty, convenience, economy and all-weather utility includes so many high-grade features and accessories for $1395. Touring trunk, for instance, with cover, two suit cases and hat box; bumper; motometer; sun visor; one-piece windshield with wiper; Sparton horn and really complete equipment.

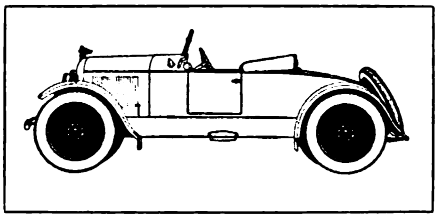
The *Cabriole* rounds out the great Earl line. If your territory is open, write or wire me for full information.

C H Earl

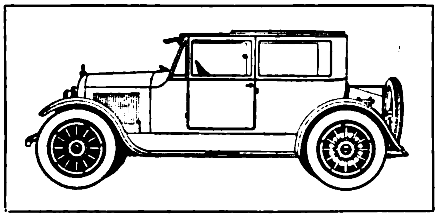
President and General Manager



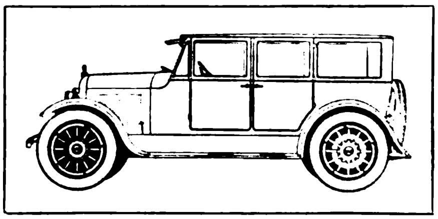
Touring Car, fully equipped, $1095



Custom Roadster, special equipment, $1485



Brougham, fully equipped, $1795



Sedan, fully equipped, $1795

Touring Car	$1095
Cabriole	1395
Custom Roadster	1485
Brougham	1795
Sedan	1795

Prices f. o. b. Jackson

EARL MOTORS, INC.
JACKSON MICHIGAN

"The right line, at the right price, with the right dealer discount"

FISK RED-TOPS

"Whip the demand for cheap tires"

Their sale brings a good profit, holds present customers and secures new ones. This is what they have done for one dealer:

Flemingsburg, Ky., July 19, 1922.

Fisk Tire Co.,
816 Main St.,
Cincinnati, Ohio.

Gentlemen:—

When your Mr. Leonard fought me into buying Fisk Red-Tops back in 1919 he started me on the road to success in the tire business.

My business has steadily increased since then, and I attribute this to the fact that every man that ever bought a Red-Top has not only continued buying them, but sent me more customers.

The Red-Top has successfully whipped the demand for low-priced tires by demonstrating that they are cheapest in the long run.

In all the years I've sold Red-Tops, I have only had two come back for adjustment.

I am giving you this information in appreciation of the fine service and treatment accorded me by your company.

Yours,
Central Garage,
M. C. Foxworthy.

When you sell Fisk Red-Tops you will have the one tire that is without competition.

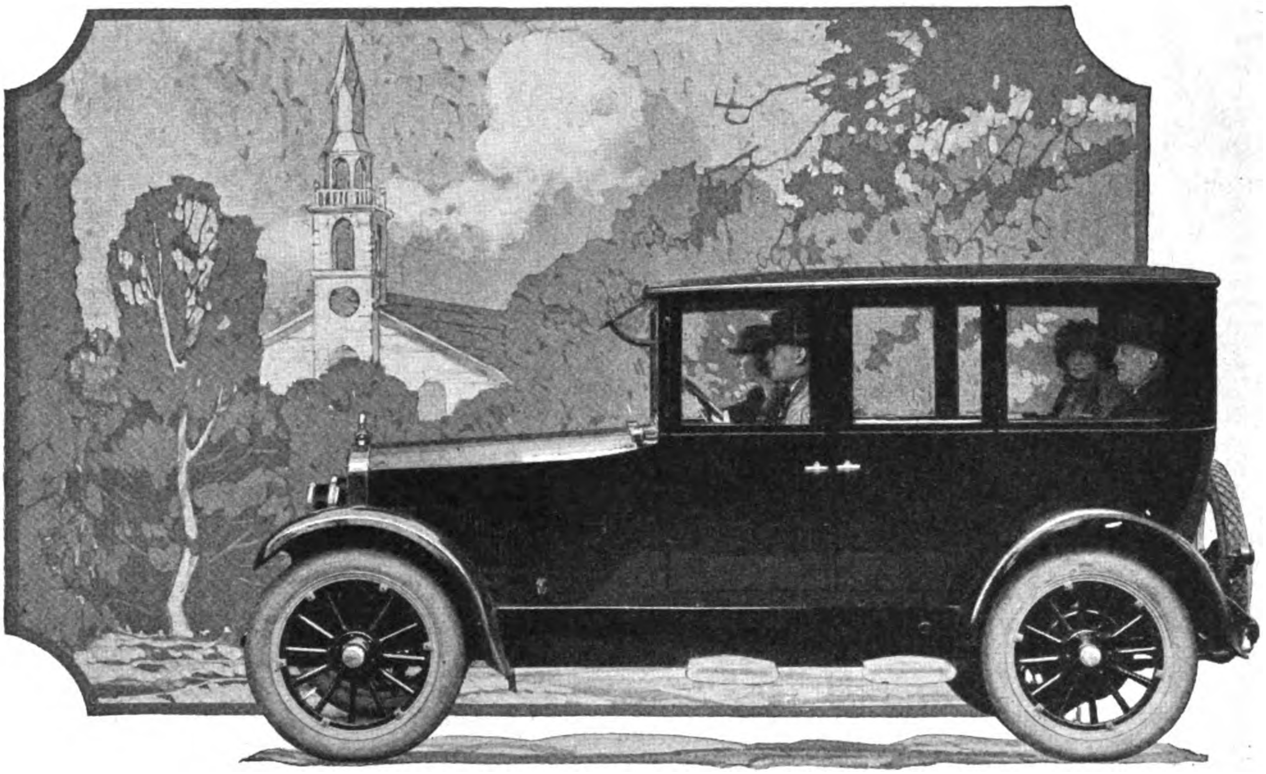
There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.

Extra Ply of Fabric—Extra Heavy Tread
FISK
RED-TOP
CLINCHER TIRE
Trade Mark Reg U.S. Pat Off.
Time to Re-tire?
(Buy Fisk)

CLEVELAND SIX

THE WONDER CAR OF THE YEAR



New Low Prices Widen Its Selling Field

IT is a remarkable achievement to have created the smartest car of its size and the greatest value of its class, in the new Cleveland Six.

But to have established the new low prices which permit the widest ownership of this fine car is an unqualified triumph.

Watchful waiting won't get a dealer a valuable franchise—there are too many go-getters on the job.

Better inquire if your territory is permanently closed. It may not be.

CLEVELAND AUTOMOBILE COMPANY, CLEVELAND
Export Dept. 1819 Broadway, New York City Cable Address, '*Cleveauto*'.

New Low Prices!

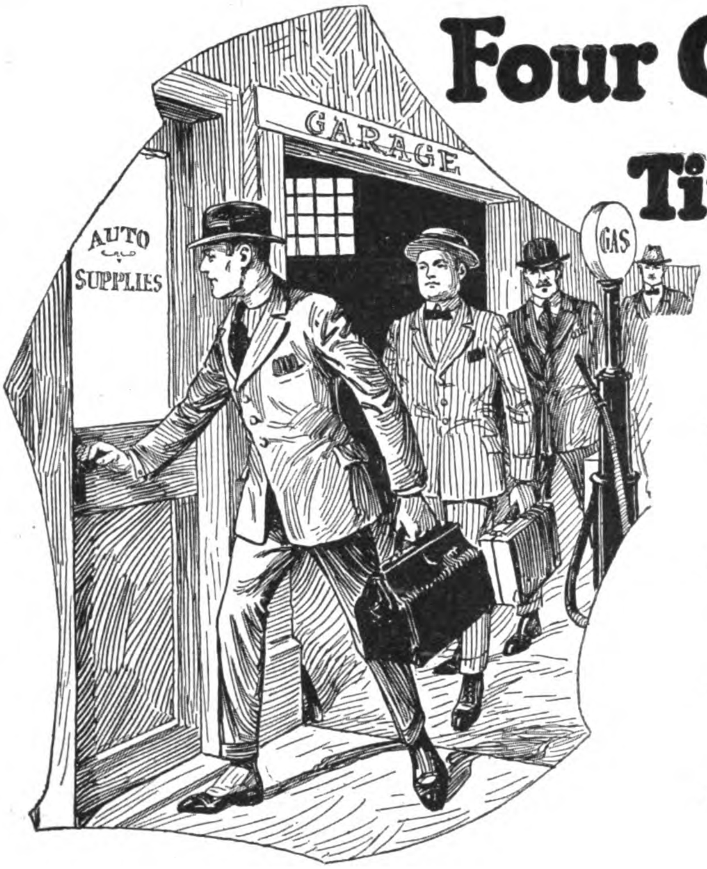
Effective August 2nd, 1922

Touring Car	$1095
Roadster	1085
Five Passenger Sport	1260
Coupe	1495

All Prices F. O. B Cleveland

SEDAN

$1585



Four Order-Hounds and the Timer-Wise Dealer

O. H. No. 1: "I sell the famous Pink Moon Timer. What can I put you down for?"

T. W. Dealer: "Put me down for a dumb-bell. I bought some of 'em last Spring. Can't give 'em away."

O. H. No. 2: "Lemme show you the Not-a-Miss Timer. It's going to sweep the country."

T. W. Dealer: "Let 'er sweep. The only dust I'm after is gold dust."

O. H. No. 3: "We're pushing our Tinco Timer. Wait till you see our advertising."

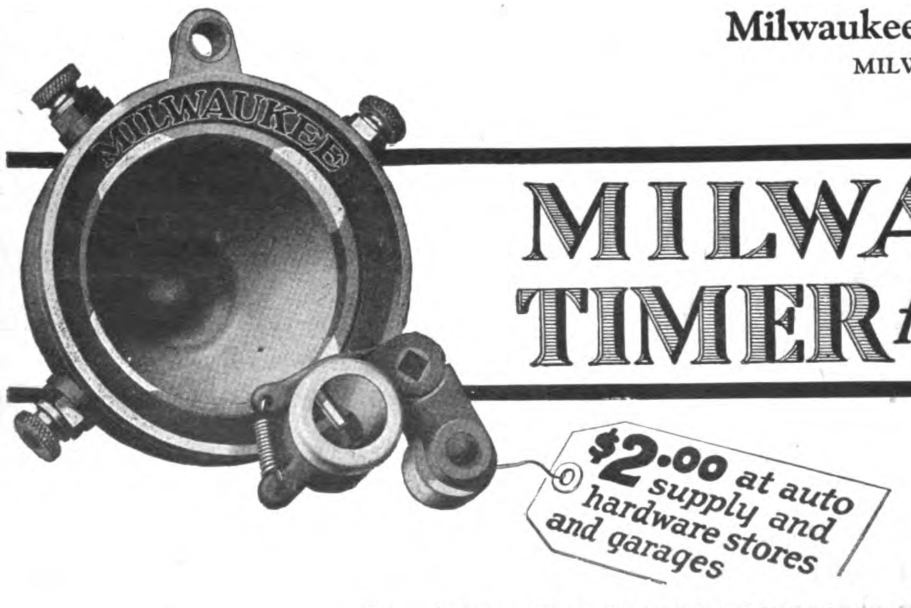
T. W. Dealer: "All right—I'll wait. Goo'bye!"

Get Timer-Wise!

Concentrate on the best known timer—because it's easiest to sell! Your trade knows the Milwaukee. Why waste time "explaining" some timer they never heard of? Milwaukee Timer advertising is working for YOU all the time. Hook up to it! How's your Milwaukee stock now?

Then Salesman No. 4 came in, representing a good Jobbing House. The Timer-Wise Dealer re-ordered *Milwaukee Timers*, gave No. 4 a Good Cigar, and went back behind the counter again, to his quick Turn-overs and Satisfied Customers.

Milwaukee Motor Products, Inc.
MILWAUKEE, WISCONSIN



MILWAUKEE TIMER *for* FORDS

Attractive Steel Display Stand sent *free, postpaid,* on request. Write for yours.

MIDWEST

Performance—*and* Price

A NEW schedule of prices on all sizes of Midwest Engines became effective (August 10th).

This new—lowered—schedule is the result of careful analysis of production costs based upon volume production—of a quality product.

On a product of admittedly exceptional *performance* ability—proved in truck—tractor—motor bus—and taxicab service—you will find us *now* able to *out-sell* most any *worth-while* engine commercially available.

Two sizes (of four-cylinder) also ready for passenger car installation containing *all the* distinctively Midwest features.

Complete data promptly sent upon request.

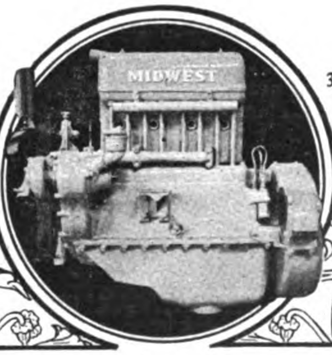
Address Dept. 12

Very truly yours,

MIDWEST ENGINE CORPORATION
Indianapolis, U. S. A.

Lon R. Smith

LON R. SMITH, *Vice-President*
Directing Sales and Advertising



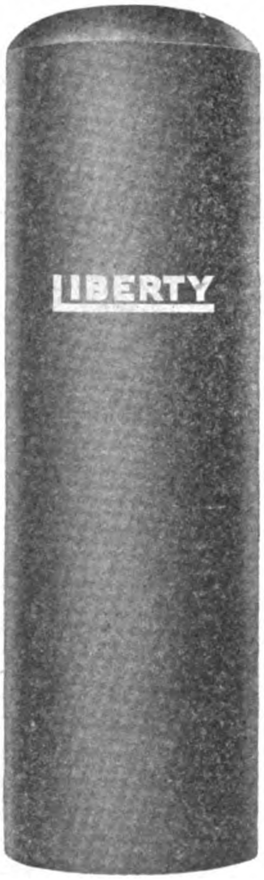
Sizes

3⅜ x 4½ 3⅝ x 5 4⅛ x 5¼
4½ x 6 4¾ x 6

Forget Bore and Stroke - It's Performance that Counts

You Cannot Afford to Take Risks With Your Air Receiver!

Liberty Air Compressor Receivers Are Fully Tested and Guaranteed!



Liberty Air Receivers are SAFE—EFFICENT — Made of HEAVY WELDED STEEL — BACKED by Years of Air Compressor Building! Every Liberty Air Compressor is equipped with a specially constructed Liberty Air Receiver—as an actual part of the compressor unit. While Liberty Receivers are built for Liberty Compressors they may be purchased for use with other makes. Ask your jobber or write us for details of sizes and prices on Liberty Air Receivers.

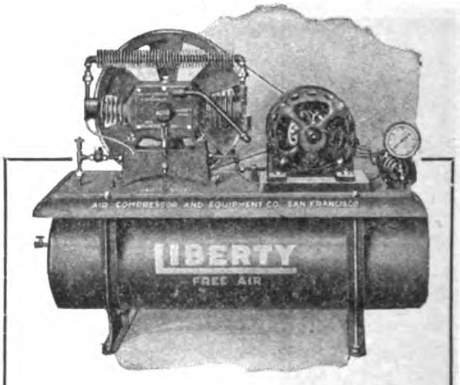
And Further Do You Know?

—that all Liberty Air Compressors have BRONZE bushings?

—that all Liberty Air Compressors have Hollow Steel Ground Hardened Wrist Pins?

—that all Liberty Air Compressors have BRONZE heads?

—that the above are only a few of the "better" points about Liberty Air Compressors.



We make various sizes of Liberty Air Compressors—for use in private or public garages, or for use on large contracting jobs. Liberty Air Compressors are being used today by HUNDREDS of prominent concerns in the United States and foreign countries. Write TODAY for complete details on the Liberty Air Compressor.

Air Compressor & Equipment Co.

46-50 NATOMA STREET, SAN FRANCISCO, CALIF.
504 SO. SAN PEDRO STREET, LOS ANGELES, CALIF.
1433 CARROLL AVENUE, CHICAGO, ILL.

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII. No. 10 SEPTEMBER 1, 1922 $3.00 PER YEAR

OUTLOOK PICTURED BY BAY CITY FIRM

Pacific Region Prosperity Facts, and Reasons for Them, Convincingly Set Forth By Accelerator Maker.

While the past record breaking sales in all branches of the industry may not continue through the winter, there are indications that the fall and winter seasons will be exceptionally good, particularly on the Pacific Coast. That is the opinion of Williams Bros. Aircraft Corp., San Francisco, manufacturing the Williams accelerator for Ford cars, and whose unusual success is due in no small degree to keeping in close touch with economic conditions.

According to this concern, parts and accessory sales for February, 1922, probably the poorest month of the year, were on a level with the peak of the season sales for 1921, or approximately $20,000,000. Since January, 1922, there has been an upward trend in parts and accessory sales which in June, 1922, reached the $50,000,000 mark, an increase of $30,000,000 over June of the preceding year.

Although a normal seasonal decline undoubtedly will occur during the winter months, parts and accessory sales are not likely to drop nearly as low as the 1922 level. Nor will this seasonal effect be felt as keenly on the Pacific Coast as in other sections. Moreover, the fact that agricultural sections have resumed buying should, in a measure at least offset the usual retarding effect of winter.

Williams accelerator sales for this season have thus far more than doubled those of 1921. Statistics relative to Pacific Coast sales of this device show very little decline during the winter months, due to the all-year motoring conditions; and the increased production of Fords will be another factor tending to keep the market steady this winter. Such is the pleasingly accelerative Williams reasoning; and all indications back it up.

Trade Visitors Fewer.

The region west of the Rockies had less than its usual monthly quota of prominent Eastern automotive trade visitors during August. However, the following have recently appeared, on either business or pleasure bent, in large Coast centers: Charles R. Hathaway, president of Badger Mfg. Co., Milwaukee, Wis.; S. L. DePew, comptroller of Paige-Detroit Motor Car Co., Detroit; Ralph Miller, Campbell-Ewald Co., Detroit; William McKinney, vice president and director Young's Rubber Corp., New York City; L. M. DeHass, Prest-O-Lite Co., Inc., Indianapolis; Thomas F. Kimball, director of Hood Rubber Products Co., Watertown, Mass.; Fred B. Sides, assistant sales manager of Hupp Motor Car Co., Detroit.

Goodyear's Highest Mark.

Friday, August 18, saw the largest daily production of tires from the plant of Goodyear Tire & Rubber Co. of California, at Los Angeles, in its history of less than three years. On that day 4666 tires and 5306 tubes were turned out, eclipsing the previous highest record, made August 12, 1921, of 4076 tires and 5000 tubes.

Increasing production may be said to be a very practical response to the curious, especially the competitively curious, as to "how the company is coming on." In the present situation as to price competition, Goodyear officials in both Akron and Los Angeles are said to deem it a wise tactical plan not to resume, at present, issuing financial statements frequently. Produce, and puzzle the competitor, seems to be the Goodyear policy at this time.

San Luis Obispo, Calif., metropolis of the county of that name, will have its second automobile race meet of the season September 4, Labor Day.

CALIFORNIA HAD NO SUMMER SLUMP

July New Car and Truck Registrations Beat Year Ago 55 and 95 Per Cent for Month, 44 for Half Year.

Not even the formerly dreaded "summer slump" seems able to stop the Pacific Coast demand for motor trucks and passenger cars. Registrations of new cars and trucks in California for the first 6 months of 1922 showed a gain of nearly 44 per cent over the corresponding period of 1921.

It was natural to suppose sales would slacken in the midsummer month of July. Instead, there was a forward spurt, the total registrations for the month showing a gain of 55 per cent over July, 1921; and the gain in motor truck registrations was more than 95 per cent over July of last year. Here are the figures:

	Northern Calif.		Southern Calif.	
	Pass. Cars	Trucks	Pass. Cars	Trucks
July, 1921....	4407	495	4290	405
July, 1922....	6215	944	6909	825
Gain	1808	449	2619	420

The figures show a total gain for the month of 4427 passenger cars and 869 trucks for the whole state.

Including July, which was not included in the calendar half-year tabulation in Motor West of August 15, comes California's motor vehicle department report covering the fiscal half year from February 1. It shows that at the end of July California passenger car registrations totaled 708,097; motor trucks, 35,187; trailers, 3935; motorcycles, 14,226; compared with 571,712 passenger cars, 32,218 trucks and 15,752 motorcycles in the same period in 1921, for which the number of trailers is not stated. It shows an increase of 136,385 passenger cars and 2971 trucks, and a decrease of 1526 motorcycles. Los Angeles County retains its big lead.

PACIFIC REGION'S PROSPERITY FACTS

Federal Reserve Summary One of Most Interesting and Convincing Proofs Even Wailers Could Ask.

Want convincing proof of Pacific region prosperity? Then read what follows.

On August 16 the Twelfth Federal Reserve District summary said that, despite the retarding influence of strikes in the railroad and coal mining industries of the nation, business activity in this district continued to increase during July.

Bank debits in 20 principal cities were 12 per cent greater in value than in July, 1921—by far the largest increase in any month of this year, compared with the same month a year ago.

Retail sales of 32 representative department stores were 3.1 per cent greater in value than in July, 1921, this being the third consecutive month during which such an increase has been noted. Although wholesale dealers in ten lines of business report generally that retailers are still buying to meet current needs only, nevertheless the value of sales in nine of the ten lines was greater in July, 1922, than in the same month last year.

Customs reports from the four largest ports of the district, covering the first half of 1922, show that there was a substantial increase, compared with the corresponding period of 1921, in the physical volume of the principal commodities exported and imported.

As compared with a year ago, employment conditions are completely reversed. In July, 1921, unemployment throughout the district was general; today, reports of a shortage of laborers are not uncommon. In the mining districts of Arizona, Idaho, Nevada and Utah particularly, there is a strong demand for skilled miners.

Productive activity has continued generally at the high levels reached in June. Mining of copper, gold, lead, and silver has been more active than at any time this year. Production of gold is increasing steadily, partly because of enlarged dredger operations in California and partly because of the reopening of deep quartz mines in the state and in other gold producing states of the district.

Lumber camps and mills have been forced to curtail operations on account of the unusual fire hazard this summer, but production of finished lumber during July was 41 per cent in excess of the output in July, 1921.

Petroleum production in California at 375,695 barrels per day, set a new high record, the increase occurring despite the closing of 620 wells in the older producing fields to conserve storage facilities and prevent overproduction. On July 31, stored stocks of petroleum in the state totaled 45,187,910 barrels, the highest figure reached in the past 5 years.

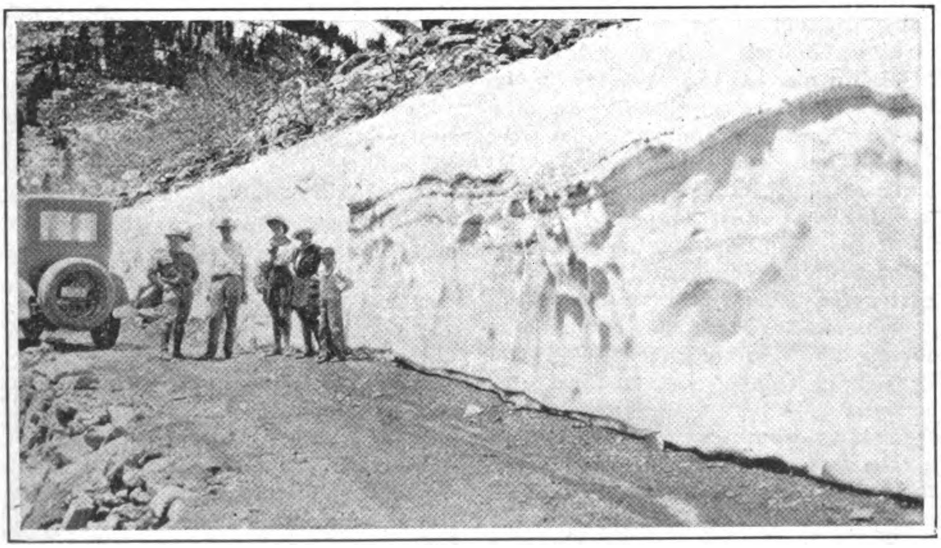
There was a seasonal decline in the number of building permits issued during July as compared with previous months of this year, but compared with July, 1921, there was an increase of 18.8 per cent.

As threshing has progressed, estimates of the yield of wheat in the district have been further reduced. A total production of 98,300,000 bushels was forecasted on August 1, compared with a forecasted yield of 103,518,000 bushels on July 1, 1922, and a total yield of 122,000,000 bushels in 1921. The crop of barley in California, now estimated at 38,400,000 bushels, is approximately 9,000,000 bushels more than the 1921 crop. Prices of grain are below those of last year, and the movement to market is proceeding more slowly than a year ago.

Climatic factors have favored the fruit crops of the district, and if existing train service can be maintained, their movement to market will be accomplished without the serious losses which were threatened by recent temporary embargoes on shipments of perishable products, imposed as a result of the railroad strike. A record production of dried fruits is already in prospect. Opening prices named on all varieties, except raisins, have been higher than in 1921, when prices were unusually low because of the necessity of moving large carry-over stocks as well as the new crop.

Contrary price tendencies appeared during the month, advances and declines in the prices of the principal products of the district being equally numerous. In the country as a whole, raw materials have declined approximately 2 per cent. The general wholesale price level, as reported by the Department of Labor, increased 3.3 per cent during the month and now is 9.9 per cent higher than one year ago. The cost of living in the four principal cities of the district, as reported by the same agency, was relatively stable during the second quarter of 1922, continuing to range from 14.4 to 24.1 per cent below the peak of June, 1920.

Country banks are now being called upon to aid in financing the harvesting and marketing of the district's crops, and they have slightly increased their borrowings from the Federal Reserve Bank. The banks in the large cities continue to meet the demands of their customers without seeking aid from the Federal Reserve Bank. Loans and discounts of 68 reporting member banks increased $17,600,000 during the month, and their deposits increased by an equal amount. Their rediscounts with the Federal Reserve Bank declined by $6,913,000 to a total of $9,362,000—with one exception, the lowest point reached this year. Total rediscounts of city and country member banks combined, on August 16, at $43,388,000, were approximately the same as on July 15. The prevailing interest rate charged customers by banks in the largest cities of the district is unchanged at 5½-6 per cent.



HOW SAND ELIMINATED SNOW QUICKLY FROM FAMOUS TIOGA ROAD.

Recently Motor West made public the suggestion of Wallis D. McPherson, of Mono Lake, Calif., based on practice in that vicinity, that distributing sand on top of snow accumulations would clear roads quickly and cheaply. Here is a picture, taken on Tioga Road on June 8. In this case the snow apparently was too deep and packed to be removed by the sand method alone. Blasting was used also. The sand, however, helped much, and in most cases, it is said, would suffice. It can be distributed by hand or otherwise. The sun warms it. Thus the snow is melted much more rapidly than if nature is left to do the job alone, or if usual methods are employed.

Going, going—vacation time.

AUTO-BUNGALOW NEW IDEA OF REO

California Company Makes a Standard Model of de Luxe Outfit that Frees Tourists from Hotel Life.

A new Reo thought is that Auto-Bungalow ought to appear in all new unabridged dictionaries, to describe a complete home on wheels.

The Auto-Bungalow is a hybrid, born of the camping life now the vogue everywhere. Up to this time, these outfits have mostly been home-made, without any thought of body lines or standardized equipment, with the result that to many they have been unattractive and unsatisfactory.

To meet a steady demand, Reo Motor Car Co. of California has designed a standard model, which has a very pleasing appearance, somewhat resembling an uptodate motor bus, and has a road speed of 30 to 35 miles per hour. It is handled as easily as a sedan, and is able to negotiate mountain roads where any other motor vehicle can safely go.

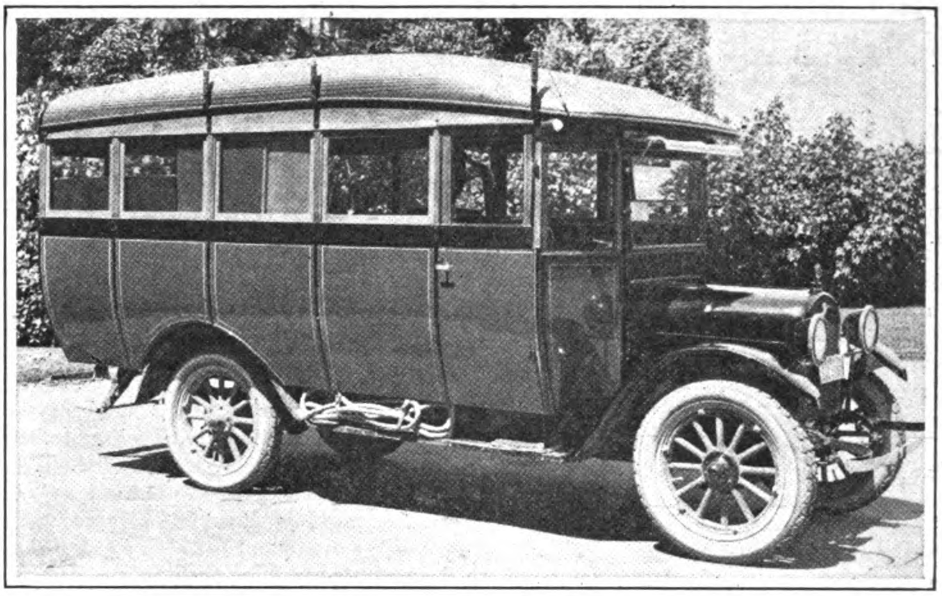
The body is mounted on the Reo Speed Wagon chassis of 128 inch wheelbase. The height is sufficient to allow occupants to stand erect inside. Airplane spruce is used largely in the construction, to prevent the superstructure from being top-heavy.

The interior equipment includes writing desk, combination buffet and ice chest, Ottoman bed of Pullman type, clothes closet, gas stove, white enameled sink with closet for cooking utensils, hot and cold circulating water, toilet, two revolving portable leather covered chairs, portable collapsible dining table, clock, rear view mirror, floor covered with battleship linoleum, nickelplated and glass hardware, opaque curtains and interior portieres (insuring privacy), and two dome lights provide sufficient illumination.

The interior is stained and varnished; the exterior is painted and finished in colors selected by the purchaser. Ventilation is obtained by means of drop windows, which in each case are supplied with screens. There is a door on the front right hand side, and a rear door with rear folding step, making easy both entrance and exit.

Some purchasers of these Reo Auto-Bungalows are fitting them with radio outfits. For those who wish to travel with a driver or servant, an arrangement is being made for hanging an auxiliary bed and tent on the outside of the vehicle.

These outfits are made sufficiently sturdy to make trips of transcontinental length. Their owners invariably are enthusiastic about them, for they have all of the advantages of first class hotel accommodations, regardless of where one decides to stop.



REO AUTO-BUNGALOW, CALIFORNIA PRODUCT, A COMPLETE HOME ON WHEELS.

News Among Oakland Trade.

Wills Sainte Claire cars will be handled in Alameda and Contra Costa Counties, Calif., by Russell & Wilson, composed of Cy Russell and C. R. Wilson, 2857 Broadway, Oakland.

L. M. Field, Inc., San Francisco, distributor of Earl cars, has made J. W. Shaw, 2849 Broadway, Oakland, dealer for the two Eastbay counties. Shortly before, Mr. Shaw had taken the Templar for the same territory.

California Auto Sales Co., 287 12th St., headed by Elias W. Berger, now is a sub-dealer for Oakland cars, having been appointed by Purser-Oakland Motor Car Co.

White Co., sub-branch of the Coast manager's office in San Francisco, has occupied its new building in Oakland, at East 12th St. and 5th Ave. It has one story but is constructed to permit addition of a second story, expected to be built soon, to provide for rapid business growth, states C. L. O'Brien, Eastbay manager.

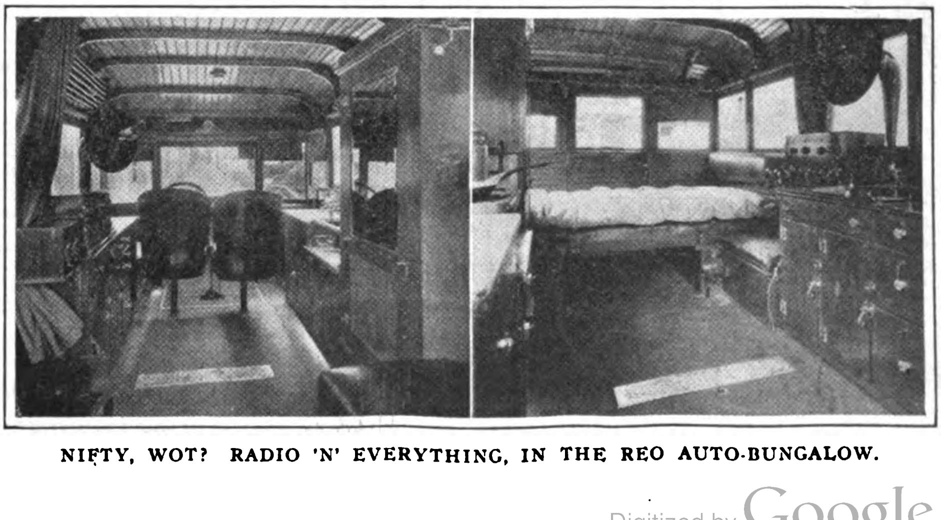
Two new motor truck lines represented are International and Traffic. Girola Brothers, 4432 Telegraph Ave., has been selected by International Harvester Co., San Francisco, to handle International trucks in Oakland.

Chapin & Henderson, in Talbot's Garage, 1440 Webster St., have been appointed Traffic truck dealers for Alameda and Contra Costa Counties.

C. A. T. A. Headlight Stations.

California Automobile Trade Association has announced the first list of official headlight testing stations in Southern California. Twenty-three are in Los Angeles, 6 in Santa Barbara, 4 in Long Beach, 3 in Santa Ana, 2 each in Whittier, Oxnard, and Ventura, and one each in Orange, Huntington Beach, Pasadena, Fullerton, Riverside and San Bernardino.

Rubber mats on the running boards protect against slipping.



NIFTY, WOT? RADIO 'N' EVERYTHING, IN THE REO AUTO-BUNGALOW.

A NEW CUTOFF TO BIG BEAR VALLEY

Contract Let for Federal Aid Road to Cost About $300,000, Cutting Trip's Time from Four Hours to One.

To feel the car go up, up, up, to 8000 feet above the sea, and to feast eyes and soul on a fascinating panorama—only relatively few of those who should, have realized this great pleasure, as it is enjoyed in motoring from San Bernardino, Calif., to Big Bear Lake via Mill Creek Road, 45 miles in 4 to 4½ hours. Yet the total is large and has increased remarkably in the past 5 years. The latest news should swell the total exceedingly.

A project, worked for during two years, is at the point where a contract has been let for the Deep Creek cutoff, from Mill Creek Road, shortening the trip to the lake to 27 miles—to one hour, from four. The cost, nearly $300,000, is provided for by California bonds and Federal aid. The cutoff is indicated on the accompanying map. It will be about 12 miles long, 22 feet wide, with no grade over 6 per cent. It will enter Big Bear Valley near the mammoth dam. A bridge will be built across the dam, meaning a stronger dam and a stronger bridge than one without the dam's support.

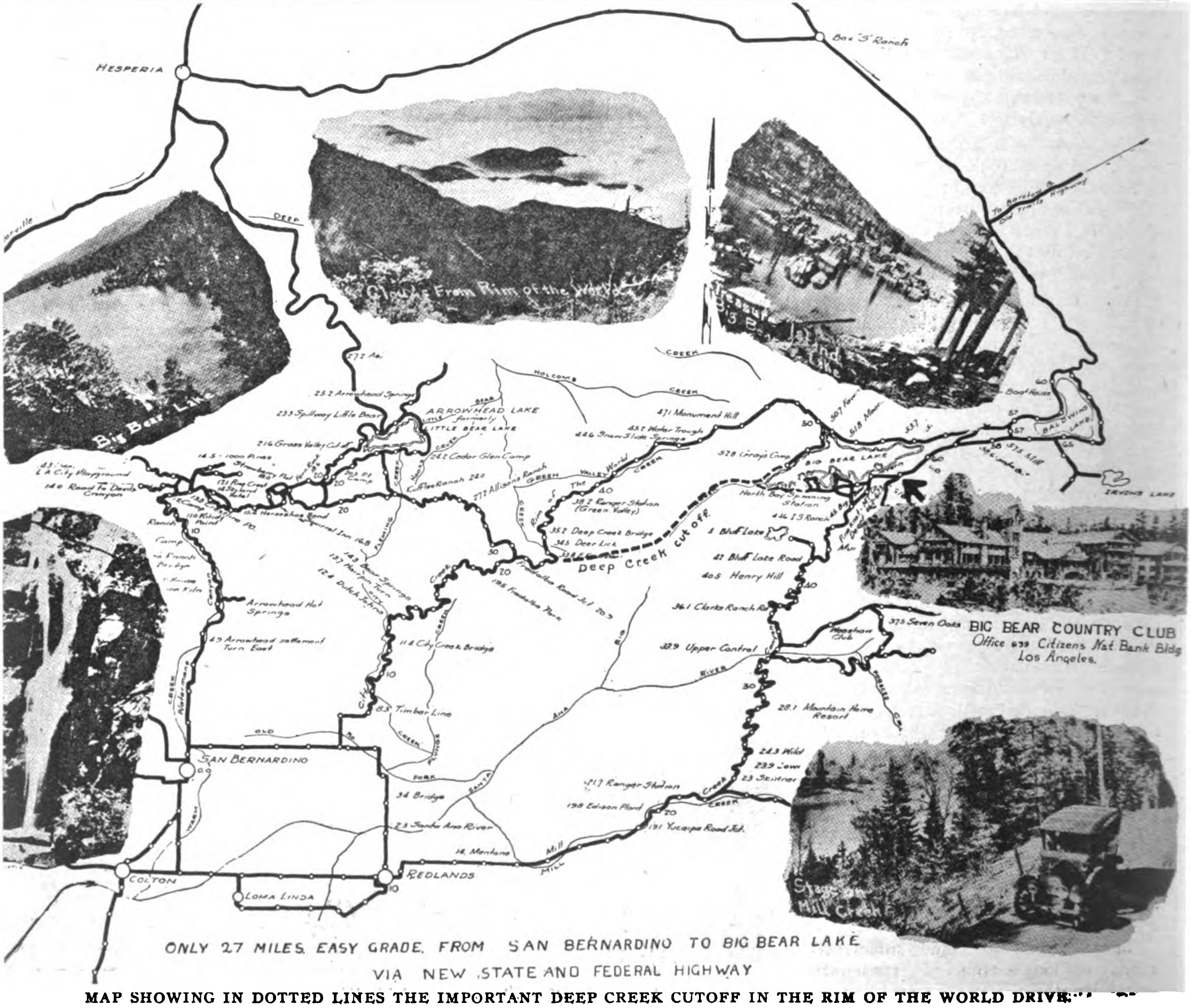
Records of San Bernardino County's traffic department show 19,886 cars—meaning about 60,000 persons—passed into Big Bear Valley last year through the Mill Creek control. National Park Service figures show 18,947 cars went to Yosemite, and 15,736 to Yellowstone, in the same period.

The map is used by courtesy of Robert E. Magner, secretary of Big Bear Country Club, 639 Citizens National Bank Building, Los Angeles. In addition to showing the cutoff for which contract has been let, it shows the famous Rim of the World Drive.

The vignettes picture some of the beauty spots; but the tremendous vista that grips one in looking down on the world, as the car goes up and up, and then rolls gently down toward the lake—that is the real experience.

Motor West Statistics in Demand.

That the factory eyes of the industry are on the Pacific region is indicated strikingly by the way registration statistics which appear in Motor West create not only interest but surprise. Demand for some which appeared recently was so strong that reprints had to be made by F. Ed. Spooner, Motor West advertising manager, located in Detroit.


Hesperia
Box 'S' Ranch
To Barstow & Old Trails Highway
Deep
Clouds From Rim of the World
Big Bear Lake
Big Bear Lake
27.2 Aai
25.2 Arrowhead Springs
23.3 Spillway Little Bear
ARROWHEAD LAKE formerly LITTLE BEAR LAKE
21.6 Grass Valley Cut off
14.5 - 1000 Pines
L A City Playground
14.0 Road To Devils Canyon
17.1 Pine Crest
Sky Land Hotel
Horseshoe Bend
Squirrel Inn 16.8
Arrowhead Hot Springs
4.3 Arrowhead settlement Turn East
24.2 Cedar Glen Camp
Cuffles Ranch 24.0
27.7 Allison's Ranch
Holcomb Creek
Green Valley Creek
Rim of The World
47.1 Monument Hill
45.7 Water Trough
44.6 Snow Slide Springs
38.7 Ranger Station (Green Valley)
35.7 Deep Creek Bridge
34.5 Deer Lick
Deep Creek cut off
52.8 Gray's Camp
BIG BEAR LAKE
North Bay Spawning Station
44.6 I. S. Ranch
Bluff Lake
42 Bluff Lake Road
40.5 Henry Hill
36.1 Clarks Ranch Rd
33.9 Upper Control
Boat House
Baldwin Lake
Irvins Lake
37.5 Seven Oaks
BIG BEAR COUNTRY CLUB
Office 639 Citizens Nat. Bank Bldg Los Angeles.
28.1 Mountain Home Resort
24.3 Wild
23 Skinner
21.7 Ranger Station
19.8 Edison Plant
19.1 Yucaipa Road Jct.
14. Mentone
Mill Creek
11.4 City Creek Bridge
8.3 Timber Line
3.4 Bridge
2.3 Santa Ana River
Santa Ana River
Plunge Creek
Waterman Canyon
San Bernardino
Colton
Loma Linda
Redlands
Stage on Mill Creek
ONLY 27 MILES EASY GRADE FROM SAN BERNARDINO TO BIG BEAR LAKE
VIA NEW STATE AND FEDERAL HIGHWAY

MAP SHOWING IN DOTTED LINES THE IMPORTANT DEEP CREEK CUTOFF IN THE RIM OF THE WORLD DRIVE.

WATSONVILLE SHOW WINS MUCH PRAISE

Exhibitors, in Surprised Appreciation of Exposition's Scope, Beauty and Zip, Help Make It a Success.

Well, Watsonville had its show; and it was a show worthy of any city several times the size of Watsonville, the live town between pretty Santa Cruz and historic Monterey, California.

August 12-16, inclusive, was the period. J. S. Martin, experienced in such work in the Bay region, was the manager; and he was backed enthusiastically by the Watsonville Motor Car Dealers' Association in his statement, after the show was over, that the next annual affair would eclipse it. Backed enthusiastically, because this show was so handsome, so adequately housed in the fine Civic Auditorium (even San Jose and Los Angeles dealers have to use tents), so generously appreciated by exhibitors, and by spectators representing a wide area, that beating it next year would seem a difficult thing to do. Educationally and as to sales, it was most creditable.

Some 30 different makes of cars were exhibited on the lower floor. Automobile accessories, tire and other exhibits occupied 39 booths in the gallery. The entertainment features included a Hawaiian orchestra, a fashion revue and other attractions. The attendance on the first night exceeded 2000, and more than 4000 persons were there on the closing night, when a dance concluded the period of mixed business and pleasure.

The color effects were truly artistic. Daylight was excluded. A special ceiling of delicate lavender tint harmonized with the green and gold gallery decorations. All lights were draped to resemble huge Chinese lanterns. Even the walls had special covering.

All this impelled some exhibitors to do much more than they had intended—notably Standard Oil Co., the representatives of which expressed astonishment, and then got to work and produced an exceptional exhibit. Especially notable was their educative showing of crankcase cleaning economy.

Santa Cruz, Monterey, San Benito and Santa Clara Counties supplied the attendance, of which dealers composed a noticeable part. Coast managers and other important representatives of nationally known concerns were there. The very good crowd on the last night was accounted for partly by attendance being necessary to qualify as the possible winner of a Ford coupe. Everyone was glad to be present, and everyone will remember the way the claims of Pajaro Valley—including its fine cider—for recognition in the wide world were presented.

Among the cars, some of them new models, exhibited for the first time, were the Buick, Cadillac, Chandler, Chevrolet, Cleveland, Columbia Six, Dodge Brothers, Durant, Ford, Essex, Hudson, Hupmobile, Jewett, Lincoln, Oakland, Oldsmobile, Overland, Packard, Paige, Stephens Salient Six, Studebaker and Willys-Knight. The automotive accessory exhibits covered a surprising range, and there were other exhibits, of kinds in keeping with the kind of show it was.

Early Rains in Coast Region.

Seattle news of August 28 was that soaking rains practically had ended forest fire danger in Washington and Oregon, and that logging and lumber mill forces again were going at capacity. Agriculture, too, was helped.

CROSS CROSSINGS CAUTIOUSLY.

At grade crossings, look, listen and think. Control your car.

Nine out of ten times, no train may be near; but the tenth time—!

From whistling post to crossing a train does quarter of a mile in 15 seconds. Can you beat it? Why try?

When your end comes, you will be a long time dead.

Do you admire a man who tries to beat a train at a crossing, when he has his family or friends with him, depending on his protection?

Most of us are weary of reading of death and destruction. Let's be rooters for safety at the crossing!

Earlier news from Portland was that crops had been benefited tremendously in Western Oregon. San Joaquin Valley, near Fresno, had showers August 28, with practically no damage to drying fruits. The night of August 26 a Motor West man, unable to sleep through a howling wind on top of Mount Baldy, elevation 10,800 feet, saw three grand storms, one eastward in the San Bernardino Mountains, and two north of Mojave Desert in the Tehachapi Range. The latter wet area no doubt extended toward Fresno.

Killed by Rum Runners?

A $100,00 cargo of liquor from Canada was seized at Monterey, Calif. Then, from Oakland, August 15, came news that Edwin A. Shouse, automobile aslesman, whose body was found in a thicket at Albany, near there, probably was killed by the rum runners. He had tipped off the authorities.

Heard on Mondays: "Ouch!" Sunburn.

Doble Steamer News Amplified.

To be chronologically correct, it is stated that ground was broken August 14, not on the 12th, at Atascadero, Calif., for the plant of the $10,000,000 Doble Steam Motors Co. The ceremony was followed by a banquet attended by 300 persons.

Men notable in San Francisco and Los Angeles spoke. President Abner Doble told of the car's development since 1916, when it was exhibited at a show, and that 30 cars have been built and that marked progress was deferred by the war. E. G. Lewis, founder of Atascadero, formerly a famous publisher of a family journal in St. Louis, and now developing Palos Verdes Estates, near Los Angeles, said that after 5 years of search for the best potential money maker for Atascadero he had selected the Doble steamer, in which he found the "best motor car power producer, steam," utilized as in no other steamer.

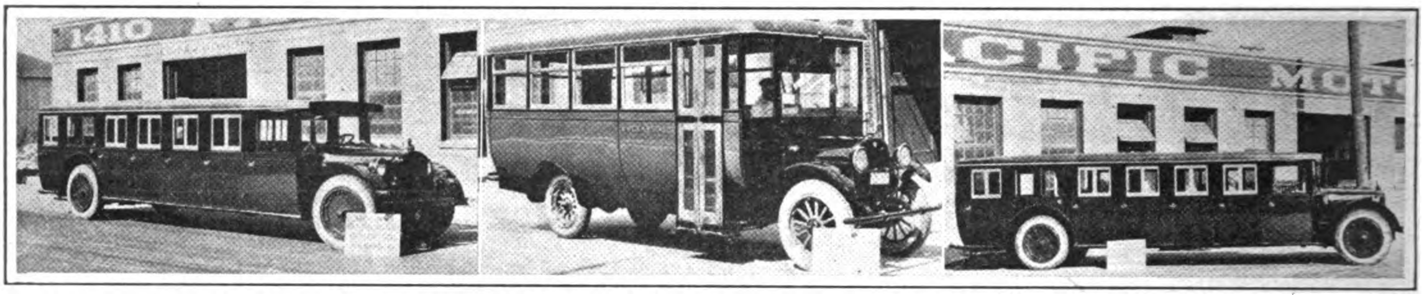
Another remarkable man — Major Cramer, of Cascaret fame, who succeeded with an initial equipment of $100, a typewriter, Indiana enthusiasm and a belief in advertising—spoke. He said "this latest and finest thing in motor cars would be in great demand by the wealthiest people."

In connection with a stock offering in Los Angeles, stated to be preferred to many underwriting offers because general public interest is desired, is the definite statement, that in addition to the Atascadero plant, in which an $8000 ($10,000 later, maybe) car will be built, a $2000 car is contemplated, this to be built in a Los Angeles plant, perhaps on the edge of Palos Verdes Estates.

A Doble car is on view at the Estates office, 952 South Broadway, Los Angeles. The production plans are to be conservatively progressive. The car is described as a distinctly quality product, not one that could well be rushed into quantity output. Numerous orders are said to be in hand already.

To Welcome Visiting Motorists.

Service! Courteous service! That is what motorists who visit California—and who leave millions of money in it every year—are to be offered in good faith, symbolized by signs to be erected by California State Automobile Association at every boundary point in its huge field. The legend will be: "Visiting Motorists: The California State Automobile Association is at your service during your stay in California. Maps, state registration requirements, traffic laws and road information supplied without charge."



THE WORK OF PACIFIC MOTOR BODIES CO., LOS ANGELES. AT LEFT, THE FAGEOL SAFETY BUS AND INTERCITY STAGE; CENTER, A WHITCOMB STAGE; RIGHT, ANOTHER VIEW OF THE FAGEOL.

REGIONAL NEEDS STUDIED AND MET

Los Angeles Company Develops a Fine Reputation as Designer and Builder of Motor Vehicle Bodies.

By GEORGE H. SEWARD.

The manufacture of bodies for motor stages and buses, for use on the highways of California and other Western states, is a business indigenous to the West.

Just as the requirements of Eastern congested cities are met there by their local factories, so have been the needs of the country of magnificent distances and roads. Designing engineers have modeled bodies to carry the big passenger loads which interurban transportation companies, schools and sightseeing companies have required.

This kind of passenger traffic has been developed in the West, with a resultant demand for motor vehicle bodies that provide protection from constant sunlight, and assure safe and comfortable transportation of from 14 to 30 or more passengers in one load.

A generation ago, children in outlying districts went to school on bicycles. With the advent of the automobile the bicycle, for this purpose, has been discarded, and as using the family car is expensive and time-consuming, the school district buys buses in which to carry the pupils.

Tourists come to the Pacific Coast to see the sights. Enterprising sightseeing companies buy big buses and conduct tours.

To get people from one place to another offered opportunity for profits to stage operators.

These conditions have produced a demand for bodies to be placed on chassis of long wheelbase and great strength, and suitable for long hauls. Western designers and engineers have had better opportunity to study these needs than Eastern men have had. Also, it is more economical for Western factories to supply and apply such bodies to chassis sold by local dealers. Shipment from the East is expensive and slow.

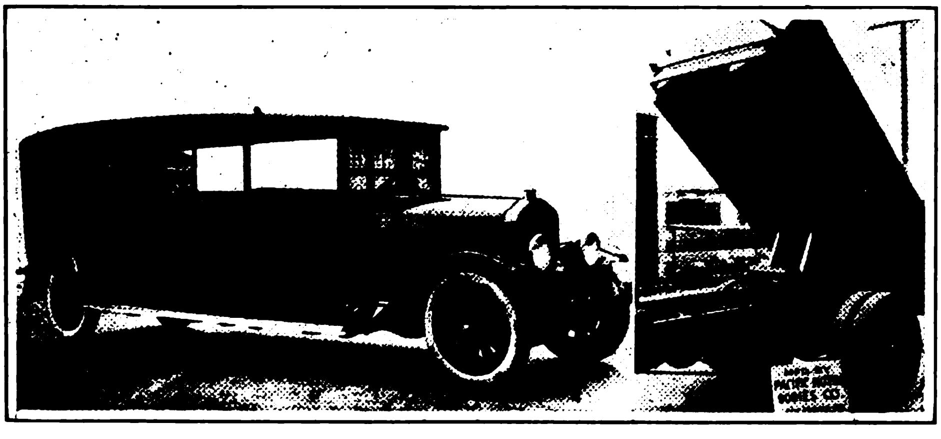
The growth of trackless passenger transportation in the past few years has been marvelous. It is ideal for interurban traffic. There are no costly tracks and roadbeds to maintain—the state does that. Power houses and booster stations are done away with. The motor stage has the convenience of being stopped easily, to take on or let off passengers, where and when required. When properly designed it is as luxurious as a private passenger car.

Pacific Auto Bodies Co. has established itself in the trade as the producer of a standard product—high grade bodies for stages, buses and sightseeing vehicles. Cut-and-try contruction has been supplanted by the use of standard designs, worked out carefully by engineers to carry the necessary passenger weight, to load and unload in safety, and to give passengers comfort and protection from the sun. The company's California top is well insulated against heat rays. Seat springs are tied with metal instead of cord. The wood framework is metal-braced. Workmanship and finish, and design having originality, have given the company a standing in the trade which is crowding the factory to the limit.

The company was incorporated November 16, 1921, and has had a remarkable record. Since January 1, 1922, it has filled $60,000 worth of orders, which are coming in at the rate of $14,000 per month. Its plant is at 1410-26 Santa Fe Ave., Los Angeles; a brick building of 28,000 square feet, with railroad siding facilities. There are departments for woodworking, blacksmithing, assembling, painting and spraying, upholstering and finishing. A force of 40 men is employed.

The product is sold principally to truck dealers for their trade with schools, motor transportation companies and stage lines. The company also manufactures dump truck and stake bodies. It is creating a standardization in design that is benefiting the trade greatly. Prices of the large bodies average about $1400 each. Carrying capacities vary from 14 to 30 persons in school buses, and up to 48 or 50 in sightseeing buses.

The personnel of the company includes men experienced in the practical side of the business and in the management of large industrial plants. R. A. Henley, capitalist, is president. G. E. Porter, well known in the automotive industry, is vice president and sales manager.



WORK OF PACIFIC MOTOR BODIES CO., LOS ANGELES. AT LEFT, A SIGHT SEEING BUS; AT RIGHT, A DUMP TRUCK.

Salton Sea Route a "Nightmare."

Calexico warns motorists against using the Salton Sea route between Los Angeles and other points and Imperial Valley. Heavy trucking is said to have made parts of the route a "nightmare."

To Hold 'em for Manslaughter.

Denver motorists who kill pedestrians are to be held for manslaughter if coroner's juries charge negligence.

KENT STEAMER IN SEATTLE SUCCESS

Successful Test Made of Oil-Burning Engine Built to Be Placed in Cars Now Using Gasoline Motors.

F. B. Kent, machinist, having charge of the experimental work of the Sterling Steam Auto Co., of Spokane, Wash., says the company will probably have its first steamer operating in 4 months. The company was organized in November, 1920, with George Schofield, engineer, as president; I. J. Blair, also of Blair Heating Co., Spokane, vice president; John L. Dirks, attorney, secretary-treasurer, and F. B. Kent, and W. B. Gerard, both of Spokane, directors.

"Since its incorporation the company has been perfecting the steam boiler and burner invented by Mr. Kent," said Mr. Dirks. "All experimental work has been completed and, August 7, a practical test was made of both boiler and engine, in the presence of a number of steam experts. Mr. Kent reports that within 3 minutes after the burner was started 275 pounds of steam would develop in the boiler, and that both burner and boiler operated continuously several hours, perfectly.

"He says the burner and boiler are so constructed that they may be placed in any gas car and operated without any change in the car other than removing its engine and transmission, so that any gas car can be transferred into a steam car in a few hours. The plan is to use crude oil as fuel. It is estimated 35 miles can be gotten from each gallon.

"The company plans, in addition to building a steam car, to manufacture burners to be used for heating in private and public buildings."

Traffic Truck Sales Change.

R. Jackson Jones, general manager of Traffic Truck Sales Co. of California, announces a change in his organization that will have an important bearing on Traffic truck sales and service in Southern California.

New headquarters have just been opened at 1359 West Washington Blvd., Los Angeles, where retail sales and service will be cared for efficiently by J. E. Kenrick, who has signed a local dealer's contract for the city. The wholesale business in Southern California henceforth will be in charge of Millard S. Binney, formerly advertising manager at the Traffic factory in St. Louis. A large stock of parts has been installed in the new quarters, and new models of this popular truck are arriving almost daily.

In speaking of the change Mr. Jones said: "In ability and experience both Mr. Kendrick and Mr. Binney are especially qualified for the work that each has taken over. Their efforts will result in the utmost of satisfaction to Traffic owners and dealers. In the past Mr. Binney has been responsible for many of the Traffic factory's noteworthy advertising and sales successes, and he is well known by all of our present dealers. His years of factory experience in both passenger car and truck lines have given him an insight into dealers' problems that makes for an especially close and helpful co-operation with them."

New National Carbon Official.

A. E. Holland has been made superintendent of the storage battery manufacturing department of National Carbon Co., Inc., San Francisco, it is made known by R. F. Oakes, vice president. He was formerly at the Long Island City factory of the company, and in San Francisco takes charge of what is said to be the largest battery plant on the Coast, now located in a splendid new building, 8th and Brannan Sts., with capacity of 2600 storage batteries a day to meet orders from the eight Far Western states, and for export.

Warm Nights Draw Out Angelenos.

Recent nights have been warm even in Los Angeles—result, even larger evening swarms of motor cars.

Two New Agencies in San Diego.

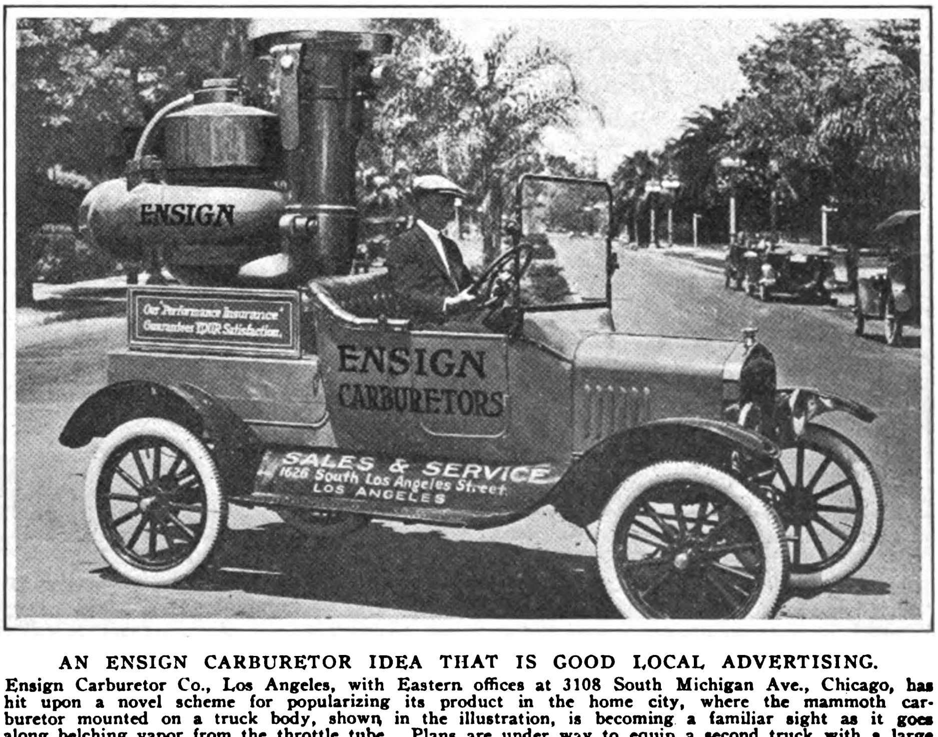
The return of F. B. Naylor into the dealer field has been a prominent event in San Diego during the past two weeks. Last April Mr. Naylor sold his very successful Buick agency, which he had had 18 years, to Robert D. Maxwell in order to retire to his ranch in the San Diego mountain country. The old "hankering to sell something that is easy to sell," as he explains it, brought him back, this time as Paige and Jewett car dealer in San Diego, with temporary quarters at 130 B St.

H. R. Newby has become Service truck dealer in San Diego for Service Truck Sales Co., Los Angeles, and has opened in General Garage, 1654 India St. He is an ex-navy man, and recently completed the real exploit of piloting a truck, a Service Red Pyramid ¾ ton speed model, from the Wabash, Ind., factory of Service Truck Co., to San Diego and Los Angeles over the Santa Fe Trail in 16 days running time, averaging 14.4 miles per gallon of gas and 480 per gallon of oil.

Justin Hammond Co., recently made Haynes car dealer for San Diego and Imperial Counties, sold four new cars in its first two weeks. Glen Cox, a San Diego salesman of long experience, has been made sales manager.

W. F. Zahm, 735 6th St., Stearns-Knight dealer, has appointed Howard Bolles sales manager.

J. W. Freiden, Hudson and Essex dealer, has moved to his new sales and service building on First St., two doors south of Broadway.


ENSIGN
Our "Performance Insurance" Guarantees YOUR Satisfaction.
ENSIGN CARBURETORS
SALES & SERVICE
1626 South Los Angeles Street
LOS ANGELES

AN ENSIGN CARBURETOR IDEA THAT IS GOOD LOCAL ADVERTISING.

Ensign Carburetor Co., Los Angeles, with Eastern offices at 3108 South Michigan Ave., Chicago, has hit upon a novel scheme for popularizing its product in the home city, where the mammoth carburetor mounted on a truck body, shown in the illustration, is becoming a familiar sight as it goes along belching vapor from the throttle tube. Plans are under way to equip a second truck with a large carburetor model, for use in the Eastern territory. The Ensign carburetor, designed for maximum efficiency with the present-day low test gasoline, is gaining favor rapidly, especially as it is placed with a positive money-back guarantee.

ENTERPRISE SHOWN BY SEATTLE FIRMS

Demands of Buyers Result in Unusual Means of Making Factory Heads Take Notice and Make Shipments.

Indicative of how business is, in Seattle, is the fact that in the first two weeks after arrival of the first models of the Buick line for 1923, nearly 60 orders were taken by the Seattle branch of Eldridge-Buick Co.; all of these without a single demonstration being given. According to A. S. Eldridge, 700 persons daily, on an average, inspected the new cars. While in Flint, Mich., recently he asked for a doubling of his allotment, but was not given a definite promise that it could be done.

Illustrative of the go-getter spirit in Seattle is the story told by H. J. Tanner, secretary, treasurer of Jensen Bros.-Tanner Motors Corp., Washington distributor of Columbia cars, on his return from the factory at Detroit. The Columbia sales head denied his request for more cars, on the ground that freight cars to carry them could not be gotten. Mr. Tanner hied himself to the Union Pacific offices and in an hour had two freight cars headed out to the factory's spur track. Then factory officials said that although his cars were on hand, the special P. C. rear ends were lacking. These come from the Timken-Detroit Axle plant. Mr. Tanner covered some more ground quite rapidly and returned in an hour, followed by a truck carrying ten rear axle assemblies. Back into the plant he went and, armed with the Columbia president's authority, personally conducted two carloads of automobiles through the assembling line, had them tested and approved, and saw them started for the loading platform with Seattle as destination.

Another case of initiative is that shown by W. S. Dulmage, of Dulmage Motor Co., who has received the first carload of Durant cars to be produced by the new $3,000,000 plant at Oakland, Calif. He has been identified with Durant activities since the early General Motors days, and claims the distinction of being the first Durant car dealer in the Pacific Northwest. Visiting the factory, Mr. Dulmage personally drove each car onto the platform for loading into the freight cars, in the presence of R. C. Durant, president; C. M. Steves, vice president and general manager; and E. C. Allender, traffic manager. At about the same time the factory had orders from 250 distributors and dealers throughout the Coast region, and 16 other separate shipments were closely following Mr. Dulmage's allotment.

Oldsmobile Co. of Washington reports that the used car problem has reversed itself as such by becoming one of famine rather than over-plenitude. The company had to call on its Spokane branch recently for four used cars, and later two used trucks. Two of the cars were driven overland from Spokane to Seattle by Mrs. Harry L. Olive, wife of the Spokane manager, and Miss Caroline Tyson, daughter of A. R. Tyson, president of the Seattle branch.

Distributors, dealers, garagemen and a representation of the entire Seattle automotive trade turned out to the number of nearly 300 for the annual picnic and frolic held at Hall's Lake, in Snohomish County. There was an exciting tire changing contest, races, the annual 5 inning ball game between the Bearcats and Never-Sweats, horseshoe pitching tournament, session of the "imperial court," and the award of 75 prizes.

New individual models are the improved Ford touring car, which has been placed on display by the ten authorized Ford agencies in Seattle; the Mitchell De Luxe 5 passenger touring car; Lexington 1923 sport car; Durant C 2 touring car; and 1923 Peerless 4 passenger phaeton.

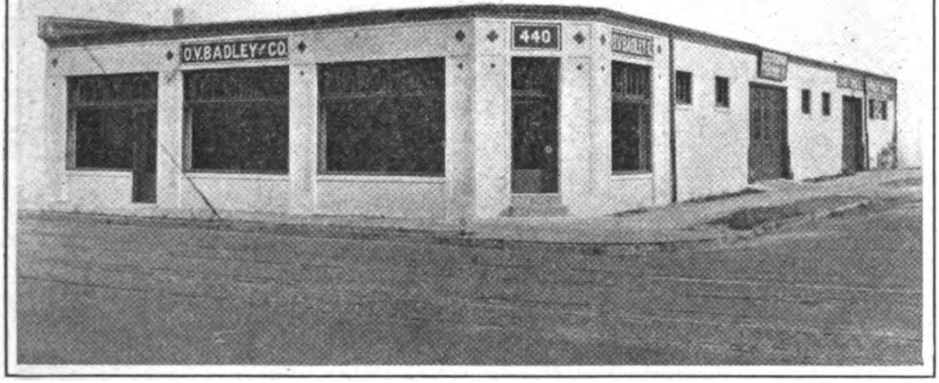
Two new passenger car agencies have lately been announced in Seattle. Northwest Velie Co. has taken the Velie car for the Pacific Northwest, locating at 1109 Pine St., where Eddie Roesch, now with the new sales organization, pioneered the line several years ago.

Statewide distribution of the Stephens car is now vested in Little Motor Sales Co., headed by M. A. Little, a business man of 25 years residence in Seattle. The former distributors, Potts, Hyde & Potts, will operate the service end of the business on the second floor of the same building.

Northwest Oakland Co., Oakland distributor, moves September 1 to a new location nearer the retail district, locating in the Gandolfo Building at Pike and Terry Sts., a 4 story building which formerly housed Shields-Livengood Motor Co.

United Motors Co., headed by A. J Copeland, has leased larger quarters at East Pine and Bellevue Sts., formerly occupied by Seattle Automobile Sales Co. The latter concern has moved one door south, and will enlarge its new quarters soon to reach from 11th to 12th Ave.

The Seattle branch of White Co. recently received what is believed to be the largest single motor truck order ever placed on the Coast—for 40 trucks, 37 of ¾ ton and 3 of 2 ton capacity. Western Bakeries Co., Seattle, will use them in handling more than 150,000 pounds of bread and cake per day.



HOME OF A CONCERN WHICH IS DOING BIG TRACTOR BUSINESS IN NORTHWEST.
The picture shows the new home of O. V. Badley Co., Cletrac tractor distributors, Portland. There are 6000 square feet of floor space, for offices, parts room, show room, machine shop and storage, with everything modern; said to be the largest exclusive tractor establishment in the Pacific Northwest. The company has more than 400 of the Cletrac tank type tractors in use in Oregon and Washington, and the business is growing rapidly. It is being helped by carrying a large stock of parts and giving the best possible service. About 100 new machines per year are sold. The force consists of ten salesmen and mechanics. Recently a large number of the larger Cletracs was sold to the Government and road contractors, for roadbuilding and construction work, as well as to loggers and lumbermen. Branch connections are maintained in Salem, Astoria, Corvallis, Clatskanie, Dallas, Hood River, The Dalles and many of the smaller towns. Cletracs are made by Cleveland Tractor Co., Cleveland, O., which now is also manufacturing a truck and the Zader car, both of which will be distributed by the Badley Co.

New Chevrolet Body Plant.

The city council of Oakland, upon request of Chevrolet Motor Co. of California, has closed 62d Ave. from Garfield to Hillside, and Garfield and Hillside Aves. from 72d to 73d Ave. On this continuous tract the Chevrolet Co. will build a new factory, devoted exclusively to making closed car bodies.

Investigation shows most accidents are due to failure to give the hand signal; next, bad brakes.

PORTLAND'S JULY SALES ARE RECORD

License Fee Cut, Dealers' Resentment of Police Zeal, and Other Reasons Cause a Splendid Showing.

The sales peak throughout Oregon was reached in July, when all new car registration records for one month were shattered. It was the best month in the history of the industry in Oregon.

In July a total of 3559 new motor vehicles were licensed. While separate sales figures are not available, it is of course apparent that most of these machines were sold to individual buyers during the month. The figures compared with those of the other months of the year as follows: January, 482; February, 686; March, 1352; April, 1527; May, 1913; June, 1224.

For two reasons July registration was unusually heavy—nearly twice that of any previous month this year—in addition to business being unusually good. These were that on July 1 the new license fee went into effect, cutting the fee for the rest of the year in half; and that a number of dealers took out private licenses in July for their new cars in stock, rather than handle them under the regular dealer license arrangement.

Cutting the license fee on July 1 in half undoubtedly caused many prospective purchasers to wait until then to take delivery.

Activity of the state traffic officers in arresting dealers on the charge of using their dealer licenses unlawfully resulted in widespread resentment, and caused many of the dealers to give up their dealer license rights and license all new cars individually, immediately upon unloading them. Under this arrangement, when the car is sold the license is merely transferred and the cost is passed on to the buyer. This actually represents a saving to the dealer, although not so convenient.

These two facts caused the registration of several hundred cars during July, which normally would not have been classed under July sales. Nevertheless the July figures still would have been record breaking, representing a splendid business.

August has continued nearly as well and undoubtedly will prove to have been a good month; and autumn regarded optimistically. Eastern Oregon continues slow in buying, but is expected to come into the market much stronger after the crops are harvested.

A new arrival on Portland's automobile row was the 1923 Mitchell, displaying perhaps as radical change over previous models as any new car brought out thus far this year. Several of the new cars were received by Mitchell, Lewis & Staver Co., Northwest distributor. The Pacific Coast "White Streak" Mitchell also arrived in Portland on its stunt tour. Postmaster Jones inspected it and pronounced the seals on the hood O. K.

Rex Mfg. Co., of Connersville, Ind., automobile top manufacturers, will extend its activities to the Pacific Coast, with headquarters in Portland. H. L. Mumford, former Portland automobile and real estate dealer, has returned there after an absence of three years and will be Pacific coast representative. Mr. Mumford, for the past three years, has been its wholesale representative, covering the entire United States, but with the growth of the business the work became larger than one man could handle and he secured the western district. The Rex Co. is one of the largest manufacturers of California tops in the country.

BUSINESS CONDITIONS.

Basic conditions have not changed during the last thirty days. The normal mid-summer slackening in business has been less noticeable than usual despite the fact that the railroad and coal strikes have continued to exert an adverse effect. Evidence of the steadiness with which all classes of goods have been moving is the fact that carloadings in July, exclusive of coal, were one-fourth greater than in July, 1921 and lacked very little of reaching the total for August, 1920, the highest record month for American railroads. Equally convincing evidence of the remarkable maintenance of business activity is the total of debits to individual accounts as reported by member banks to the Federal Reserve Board — 13 per cent higher for the week ending August 9, 1922 than for the corresponding week in 1921.—National Bank of Commerce, New York.

Frank J. Finger, a pioneer automobile man of Portland, has been named sales manager for Pacific Motors Co., Durant distributor for that territory. Mr. Finger has been in the automobile business in Portland continuously 22 years, except for the last two years during which he has been in charge of motor bus inspection for the city of Portland. He resigned that position to join the Durant concern. He claims the distinction of having sold the first car in Portland that was handled through a recognized automobile dealer, back in 1901. The car was one of the little curve-dash Oldsmobiles.

Rubber Products Co., distributor of Kelly-Springfield tires throughout the Portland field, has moved into a central location at Broadway and Ankeny St., and enlarged its activity considerably. The company is now headed by M. E. Van Horn, formerly on its sales force, and who a short time ago purchased controlling interest.

D. A. Grout has been named sales manager of Fields Motor Car Co., Chevrolet dealer for the Portland territory. Mr. Grout joined the firm four years ago as a demonstrator and driving instructor, and has risen rapidly. For the past year he has been manager of the used car department.

A. N. James, 88 North Broadway, has been named distributor for the McDowell shock absorber throughout the Portland field. The device is being turned out on the Pacific Coast and the Progressive Sales Co., Tacoma, has the national distribution.

The Lovejoy hydraulic shock absorber, manufactured at Boston, Mass., has entered the Portland field, with W. F. McKenney, at 11th and Stark Sts., as distributor.

Charles F. Tieman, who for the past 5 years has been with the Lexington Salt Lake Co., Salt Lake City, Utah, has moved to Portland where he will make his home, and has joined the sales force of the Oregon-Lexington Co., Lexington distributor for that section.

Makes Pacific Hartford Batteries.

Pacific Hartford Co., Inc., capitalized at $500,000, has been formed in the San Francisco territory, and will manufacture Pacific Hartford storage batteries in a plant leased at Shattuck Ave. and Ward St. Machinery and equipment have been installed and production has started.

R. H. O'Hea is president. He also is secretary of Paraffine Paint Companies, Inc. Charles F. Apgar, vice president, had 19 years experience in the storage battery industry, and was Western representative for a large Eastern battery concern the past four years. F. W. Unruh, general manager, allied himself with battery manufacture 22 years ago, and for 12 years had charge of all assembling plants of another prominent battery maker.

Power Sells Cooper Plates.

Power Rubber Co., San Francisco, prominent many years in tire distribution, now is distributor in Northern California for Cooper Corp., Cincinnati, O., manufacturer of automotive electrical rubber goods, such as battery plates, and which controls Cooper Storage Battery Co., maker of storage batteries. Cooper-California Co., San Francisco, was the former distributor.

WELL KNOWN LINES BACK IN BAY CITY

Standard Eight Car, Patriot Truck in New Hands, Also a Steam Car, Name of Which Is Not Divulged.

The return of two well known motor vehicle lines, one a passenger car, the other a motor truck, to active representation in San Francisco, and the announcement of the early coming of a line of steam cars, name not yet confided, have become known in San Francisco during the past two weeks.

The Standard Eight car, manufactured by Standard Motor Car Co., Pittsburgh, Pa., is now handled by H. A. Kennedy Co., 1749 Jackson St., as California distributor, and a Southern California branch has been opened in Los Angeles.

Patriot trucks, manufactured by Patriot Mfg. Co., Lincoln, Neb., will be distributed on the Coast by Patriot Sales Co., opening at 126 South Battery St.

Standard Auto Co., 1100 Van Ness Ave., which previously has restricted itself to handling used cars, has taken the agency for a new line of steam cars.

New factory offerings recently arriving are the Cleveland Chesterfield 5 passenger sport car; Cole new series 8-90 models; Willys-Knight 1923 models; Durant 2 passenger coupe; Franklin sedan; Gardner sedan; and Peerless 4 passenger phaeton and 7 passenger suburban sedan.

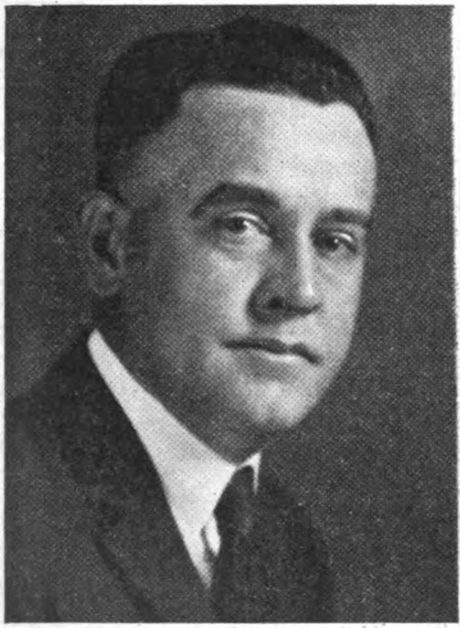
According to Chester N. Weaver, Studebaker distributor, sales of these cars for all California during the first 7 months of this year totaled 6270, leading all other makes of 4, 6 and 8 cylinder cars, which sell at more than $700. Direct sales in San Franciiso in the same period totaled 710.

Anderson-Smith Motor Co., Chevrolet agency, with four separate sales rooms and service stations in different sections of the city, has added a fifth unit by leasing a corner building, Sutter and Gough Sts., which will contain all the company's service departments and fully meet the needs of business growth, states R. A. Smith, general manager. Under a vigorous sales personnel, business had expanded in the last few months to an extent that taxed the large floor space available.

Phil T. Prather, general manager for Don Lee, Cadillac distributor, left San Francisco recently for an extended business and vacation tour through the East. He will go first to the Cadillac factory at Detroit, there take delivery of a new car, then tour farther eastward, ending up in the Maine woods. Returning, he will attend the Cadillac distributor's convention in Detroit before returning home.

LeRoy Spencer, with 10 years automotive sales experience, has returned to San Francisco, and now is manager of the San Francisco branch of Western Motors Co., Wills Sainte Claire distributor. He formerly lived in San Francisco, but in the past three years has held a prominent position in the Los Angeles territory. He succeeds Frank A. Hughes, who resigned to return to Southern California after a very successful management of one year. Mr. Spencer announces that dealer connections throughout Northern California will be greatly enlarged in the near future.

J. L. Justice, native Californian, but for some time past an executive with Maxwell Motors Corp., Detroit, has been transferred to the Pacific Coast as district sales supervisor, with headquarters in San Francisco. His early automobile sales experience was in California, and he has previously held the same post as his present one for the Maxwell factory.



DEAN MOSHER.

FRANK T. PRICE.

In 1912, Dean Mosher sold his tire business at 223 West 11th St., Los Angeles, to what became Nelson & Price, Inc., and developed into what is called the largest tire distributing agency in the Pacific region. It began in that part of its building which now is used as its service department. It handles lines of tires studied for years and selected on merit. The confidence its customers have in it is that which people have in a trusted adviser. It has been highly successful. It has expanded its fine service to what Mr. Price, president and general manager, considers the best new field with which to grow up—beautiful, prosperous Hollywood. A branch was established there recently at 1612 North Cahuenga Ave. It is equipped completely and is doing exceedingly well. As in Los Angeles, Hartford tires comprise the main line, but a full assortment of other standard tires is in stock. Interesting fact—Dean Mosher, owner of the original business, is manager of this Hollywood branch.

New Coast Highway Associations.

At Crescent, Calif., there has been formed the California and Oregon Coast Highway Association, by representatives of Redwood Highway Association and Roosevelt Memorial Highway Association. One represents seven California counties north of San Francisco; the other, Oregon coast counties. Governor Olcott of Oregon was among those present. Dr. G. H. Douglas, of Crescent City, was elected president; Fred C. Baker, Tillamook, Ore., secretary. The 1923 convention will be in Marshfield or North Bend Oregon.

C. S. A. A. Workers Meet.

A recent meeting of California State Automobile Association department heads and branch managers, representing San Francisco, Oakland, Chico, Fresno, Modesto, Salinas, San Jose, Redding, Sacramento, Santa Rosa, Stockton, Vallejo and Marysville districts, lasted two days. Many administrative problems and plans for improved service were discussed. Similar meetings will be held semi-monthly, says Secretary-Manager D. E. Watkins.

Curry a Ridge Route Boniface.

Foster Curry, formerly prominently identified with Camp Curry in Yosemite National Park, has bought Hotel Durant at Lebec on the Ridge Route, renowned among thousands of motorists who travel this wonderful highway. It will be known as Curry-Lebec Lodge. A 9 hole golf course, swimming pool, and other features are planned.

L. A. MOTOR TRADE MEN LIKE PAGEANT

Support Given To Great Exposition, Which is Drawing Huge Crowds—Demand for Cars Continues Strong.

For the general public in Los Angeles, car-owning and otherwise, the chief focus of attendance now, from August 20 to September 9, is the huge open air gathering of locally manufacture products at Exposition Park, officially styled the California Pageant of Progress and Industrial Exposition.

No branch of industry in Southern California has, for growth in the past five or six years, surpassed automotive accessories and components manufacture. Practically the entire range of automobile dealers' and users' needs can now be served by local handicraft and enterprise. The list of automotive exhibitors in the exposition is a strikingly varied and long one, although generally speaking they do not look for direct business to follow, as the show is addressed to the general public's attention—not narrowed to that of the automotive trade, but of tremendous educational value.

Automotive distributors, on the other hand, are reserving their energies for a great automobile and accessory show to be held some time in November. They are reminded constantly that coal and railroad strikes in the East do not stimulate business, but make for vexatious delays in filling orders. There is small reason for complaint otherwise, as automobile demand continues satisfactory to all distributors except those who consider 1920 their normal business year.

Following the display of the first 1923 Buick models, Howard Automobile Co., distributor, has been taking from 30 to more than 40 orders daily. The company booked more than $2,000,000 worth before a single delivery was made, and all of this took place in three weeks, with no demonstrations being made. Its best day saw 41 cars sold, as against 32 for new model sales last year. Previous to the coming of the new ones, Howard sales during July this year were 52 per cent larger than in July, 1921.

Hudson sales in Southern California in the first half of 1922 exceed those of the same part of last year 145 per cent, and Essex sales were 98 per cent larger, Harold L. Arnold, Inc., distributors for both lines, announces. In Los Angeles alone, sales were 130 per cent larger for Hudson cars, and for Essex, 85 per cent.

The Arnold organization recently sold 30 Essex and 5 Hudson cars, all phaetons, to the Los Angeles County authorities, this being an indication of the permanency of state, county and municipal government buying of motor vehicles. Large business institutions also are completely motor-mobilizing their delivering and hauling departments.

W. P. Herbert Co. recently received a solid trainload of Chandler and Cleveland cars from the factory, said to be the largest shipment of cars of the corresponding price classes ever received in Los Angeles. Additional carloads were diverted to Bakersfield and San Luis Obispo. In Los Angeles dealers gathered quickly from 20 Southern California towns and cities, and drove away half the trainload.

Stanley W. Smith, Inc., took more than 70 orders for the new Peerless car before the first 1923 models arrived August 26. Advance information that they would be radically different in appearance from previous years' offerings drew a daily stream of visitors that was remarkably large considering the high price range and the exclusive type of buyer appealed to.

> **FOREST FIRES.**
>
> **Smoke filling the air and hovering over the waters of Puget Sound brings forcibly to attention the fact that the forest fire season is here. Owing to the unprecedented hot weather and the absence of the rains June usually brings, the forests are exceedingly dry and conditions favorable to the spread of fires are most threatening.**
>
> **With the advent of summer people have flocked to the woods in search of recreation. This is a commendable thing. When through carelessness in the use of fire, however, the pleasure seekers imperil the forests, they are offenders against nature itself as well as criminal toward their fellow men.**
>
> **If there were no wrongly built campfires, or campfires that had been neglected, there would be few forest fires. If people who use the forests for recreation would be careful in regard to their matches, their pipes and cigarets, the hazard would be all but eliminated.—Tacoma Ledger.**

Strike conditions were brought home to Walter M. Brown when he was notified recently that a long awaited carload of H. C. S. cars was standing motionless at Needles, Calif. Braving the well known summer climate prevailing there, Mr. Brown, with a crew of drivers, hurried out and brought back the cars under their own power, to partially fill the volume of orders already on his company's books.

New individual models on display are the Reo phaeton with sport type body, to seat 4 or 5 passengers; Peerless 4 passenger phaeton and 7 passenger suburban sedan; Earl roadster and cabriole; Cole 8-90 new series models of 1923; Doble steam car chassis; and Willys-Knight line for 1923.

Walter M. Brown Co., which in September, 1921, relinquished the Stutz agency, which it had held more than 11 years, again has become Stutz distributor in Los Angeles. In the interim H. C. S. and Durant cars have been handled. In the old days of Stutz dirt track racing Walter M. Brown was one of the country's most prominent names as far as automobile racing was concerned. He bought the first three cars manufactured by Harry C. Stutz, and with Earl Cooper as driver won the first race in which this make of car figured, on the old Bakersfield track in 1913. A little later Barney Oldfield pushed another Brown-owned Stutz into first position in the Phoenix road race.

Another new agency is for Paige and Jewett cars, for which Earl A. Sherwood, Pico and Hill Sts., has been made an associate dealer by Paige Co. of Southern California.

Paul G. Hoffman, Inc., Studebaker distributor, is erecting a $50,000 sales and service building on Hollywood Boulevard, between El Centro and Gower Sts., to handle its Hollywood business.

Hays B. Eckert has been made service manager for Robert P. Fite, authorized Chevrolet dealer. He had 10 years' sales experience with one of the large distributors in Los Angeles.

W. F. Suppe, for three years with the former Chevrolet branch in Los Angeles, has joined Basso & Guasti, another Chevrolet sales concern, as sales manager.

Milton at 125 Per on L. A. Track.

Maybe it was because he had just become a proud father. However, on August 15 Tommy Milton and his Leach special did a lap on the Los Angeles 1¼ speedway at 125 miles per hour. Not official, but accurate; the fastest time made on any of the speedways.

Manager Young, of the speedway, has asked the A. A. A. to raise the limit for the Thanksgiving Day race from 18 to 20 entries.

De Palma's New Car for Fresno.

Ralph De Palma has reserved hotel rooms at Fresno for his wife and himself. This is understood to mean that he will compete in the September 30 race, and that he will use one of the new cars he has been building in Los Angeles.

HUGE TRUCK ORDER CAUSES A BIG ROW

Award Cut from 107 to 60 and Divided Among Three of Nine Bidders—Case May Go to Grand Jury.

On consideration, an article written for this issue, stating in some detail several singular sequences in what has become the Truck Case, in Los Angeles, is boiled down to this:

June 21, the city requested bids on 107 trucks of various capacities. There were 9 bidders—Republic, Garford, Mack, Commerce, Service, International, Pierce-Arrow, General Motors and Moreland. Since then, confusion aplenty; a charge that the lobbyist of one bidder suggested to another a funding plan whereby the two, and one other, would receive the whole order between them; a charge, described later by the charger as "kidding," that one bidder had a $75,000 slush fund; and so on; all based on and caused by competition; an unpleasant mess.

The city engineer's report, not adopted, favored giving the entire order to one bidder, not the lowest but, the engineer said, because that plan would standardize the fleet and prove most economical.

Finally, on August 23, the council voted unanimously to buy only 60 trucks, from three bidders—Garford, General Motors and Moreland. The mayor is for the standardization idea and doesn't like the award; says it was made to mollify certain bidders. Also, he will investigate the bribery and other talk. He may not sign; and the council may override him; and the matter may go to the grand jury. The awards were:

Garford—17 2½-ton truck chassis, $2448.82 each; 3 5-ton dump trucks, $4681.35 each; total, $55,673.99. General Motors—17 2½-ton dump trucks, $3250.80 each; 3 5-ton dump trucks, $5082.10 each; total, $70,509.90. Moreland—17 2½-ton dump trucks, $3925.80 each; 3 5-ton dump trucks, $5239.71 each; total, $81,647.28. Grand total, $207,831.17.

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Despite protests of two members, that other cars, costing less, would serve as well, Los Angeles' city council has voted $42,095 for 50 Dodge Brothers cars for the police.

Why Gas Price to Dealers Was Cut.

Replying to how-come comments, as to the recent cut from 21 to 20 cents on gasoline, to dealers, but none to users, especially in view of lower crude prices, oil men say demand for gasoline exceeds production and that there was not a cut but a stabilization of differential. California Oil World explains that since large companies started stations in 1915, competing with retailers, they have allowed the latter a 2 cent deduction from retail price. As competition increased, some retailers were allowed 3 cents. This roiled other dealers. Now all is peace! The "cut" merely transformed the differential into a price, and a standard one at that. The user? As lucky as he was before, in being able to get enough "present day gas."

Not so long ago many thought the automotive industry was to be what Secretary of State Hughes said Russia is—an economic vacuum.

GLIMPSE OF 300 MILE ROAD SYSTEM IN MARICOPA COUNTY, ARIZONA, OF WHICH PHOENIX IS THE HUB.

Salt Lake-to-Reno Record.

Broken, on August 16-17, by 12 hours 7 minutes—the Salt Lake-to-Reno record. Done by Budd Boddell in a Durant four, strictly stock except as to spotlights and—admittedly important—Hartford shock absorbers, which shared with the pilot in a performance which must be undergone to be understood.

The time—running time—was 19 hours 20 minutes, checked by Western Union and Lincoln Highway officials. Previous record, by a Marmon, 31 hours 27 minutes. The distance, 559.8 miles, plus enough to make the total 611 miles, due to a detour on account of road construction near Fallon.

First day—from Salt Lake City via Lincoln Highway through Fisher's Pass, Orr's Ranch, Goodyear Cutoff, Goldhill, to Ely for the night. Second day—from Ely through Eureka, Austin, Fallon to Reno.

It is news to say that apparently a very good way to cover the distance between the two cities considerably faster would be by the much better road, though some 50 miles longer by recent estimate, via Provo and around to Ely on Grand Central Highway, now adopted as an alternative for Roosevelt Midland Trail. This avoids Great Salt Desert.

Strikes Affect Northwest Little.

Seattle news, August 21, was that a careful survey showed the railroad strike and kindred disturbances had had little effect on the trend of business or comfort of the people. Westbound tourist travel by trains had slackened somewhat, but motor tourist traffic continued heavy.

By steamships and inland transportation of food and many other products originating in the Pacific Northwest and other parts of the Coast, and coal from Western Washington mines, the region is fairly independent of the East and could be much more so. Recent trade expositions promoted by manufacturers and wholesalers brought record breaking numbers of buyers from the adjacent interior.

Does a Huge Insurance Business.

Automobile Club of Southern California was third among purveyors of property insurance in 1921, in this country. Two fire insurance companies, Home of New York and Fireman's Fund, exceeded its business. The latter's net premium income was $3.-295,776; that of the club $3,181,070, compared with $2,442,974 in 1920. The club expects to reach $4,000,000 this year, and to be in second position.

God's monuments—the great hills.

NEW DUESENBERG CYLINDER HEADS

Addition to Famous Motors Expected to Give "Miller's Miracles" Hard Test in Los Angeles Race.

If you are a millionaire, and are in Los Angeles on Thanksgiving Day and reasonably full of the bird that symbolizes it—or even if you are not a millionaire but can be among those present at the Los Angeles speedway on Thursday, November 30, be assured now of some rare automobile racing. Cars equipped with the motor Miller makes in Los Angeles—notably the new Durant specials—and Duesenbergs with new cylinder heads that are expected to make those cars all but unbeatable, will compete for the engineering and mechanical leadership that superior speed indicates. No matter what other motors may do, these two makes will make the day a memorable one.

Fred Duesenberg is building several new cylinder heads, which will be functioning fully in the coming Los Angeles speedfest. Miller's "miracle motors" will be given the strongest possible competitive test.

This was told by Jerry Wanderlich when he arranged to ship his car back to the Duesenberg factory at Indianapolis recently. He and Terry Curley, his riding mechanician, had arrived in Los Angeles after the Cotati races, and were working on the car in the shop of the Duesenberg distributor, completing every detail with the exception of the cylinder head.

Originally designed for 106 or 107 miles an hour, the Duesenberg motors already had been improved by their pilots. Wanderlich, Melcher, Eddie Hearne and, at the time, Harry Hartz, succeeded, by changing carburetor jets, the timing of motors in valve action and spark, and other details, in putting the speed up to approximately 118 or 119 miles per hour.

In the last few starts, however, Murphy, Milton, Elliott and Hill, their motors of the straight-eight design but with a double overhead camshaft action on valves, have developed such amazing speed that some said "the Duesies are through"; that the game was too fast for them. But not so, according to the latest news.

The new cylinder heads were designed primarily for double camshaft action, which will greatly increase speed, say the drivers, and they ought to know; but several other little changes are also planned by the master engineer. Wanderlich's remark, in speaking of the great things expected from the new cylinder heads, was: "Boy, then watch us! They're dynamite!"

Durant to Race at Kansas City.

R. C. ("Cliff") Durant, well known motor car manufacturer and former speedway and road race champion, will take one more whirl on the speedway. Durant has entered for the Kansas City inaugural scheduled for September 16, and will drive his fast Durant special.

When Durant drove at the Tacoma speedway, July 4, it was to have been his last race, in the future he was to be nothing more than a patron of the speed sport, operating a team of four racing cars piloted by Jimmy Murphy, Ralph Mulford, Eddie Hearne and Roscoe Searles; but the Kansas City speedway officials were so insistent that young Durant decided to pilot his famous speedster in their opening meet and be with the Durant team at the Los Angeles speedway, Thanksgiving Day.

LOWER BANK RATE.

Reduction of the rediscount rate of the New York Federal Reserve Bank to 4 per cent and likelihood of changes in other reserve districts is of sweeping importance. It means: 1—That the credit situation is exceedingly sound; 2—Open market money rates will work lower; 3—Reduced cost of borrowing by the government; 4—It invites business interests to borrow necessary funds; 5—Reduced cost of manufacture, etc.; 6—Indirectly it should further cut unemployment; 7—It helps to lower cost of living; 8—Lessens the burden of those still carrying bank loans; 9—Tends to restore confidence; 10—Bolsters market value of investment securities; 11—Indirect promotion of greater buying power; 12—That Wall Street's credit requirements are not burdensome.—Chapin Hall in L. A. Times.

Durant is to leave Oakland this week for New York, to confer with his father, W. C. Durant, head of Durant Motors, comprising the Durant, Star, Flint, Locomobile and other enterprises, then the younger Durant goes to Kansas City.

Durant's racing car is in Los Angeles, where his mechanician, Reeve Dutton, is preparing it for the Kansas City contest. Dutton, who formerly was Earl Cooper's mechanic, is to take the car to Kansas City and have it tuned for the race by the time Durant arrives from New York.

Held out his hand, but didn't turn.
His ashes almost filled the urn.

What Jadson Valves Have Done.

With the winning of the 50 mile race at Santa Rosa August 6, when world's record was broken by Frank Elliott, another victory was added to the long list of speedway triumphs in which Jadson one-piece steel valves were an important part of the winner's equipment.

The history of Jadson valves had its inception on the track, and their adaptation to fill an important place in the manufacture of commercial and pleasure car equipment offers as interesting an illustration of business progress as any in the whole history of the automotive industry.

Founded 35 years ago by J. A. Drake, the firm of J. A. Drake and Sons, Inc., of Reedley, Calif., makers of Jadson valves, had its origin in a small machine shop devoted to the repair of agricultural implements in a little country town. In 1916 the Drakes designed and built a racing car, the Drake Special, which was soon renowned as the fastest car in the West at the time. It was for this car that the first set of Jadson valves were hand forged by J. A. Drake himself. He put into them all of the skill that a lifetime of intense devotion to his craft could give. This set of valves was raced for three years, the Drake Special winning many victories.

So remarkable was the performance of these valves that it was decided to market them for all makes of cars, and in 1920 their manufacture was begun under the trade name of Jadson, taken from the initial letters of the firm name. The popularity of the new valves was instantaneous, and almost from the very first the plant was forced to employ three shifts of workmen to keep the output anywhere near within reach of the demand.

It was at this time that Frank Elliott, ordered Jadson valves installed for his use, and he has been a constant user of them ever since. Other drivers have followed suit, and Jadson valves are being installed in the cars of several famous drivers, including Tommy Milton.

In August, 1920, the founder of the firm passed away and the manufacture of Jadson valves has been carried on by his six sons, who have inherited the ideals of craftsmanship that the founder incorporated in all his products. A recent incorporation and enlargement program has provided for the building of a large addition to the present plant—already enlarged several times since the birth of the industry—and it is to be expected that in a very short time, with its added manufacturing facilities, this California product will be reaching a market in every corner of the world.

Motor West
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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SEPTEMBER 1, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

A Transportation Institute

A NATIONAL transportation institute is planned in Washington and is favored by President Harding, the Interstate Commerce Commission and leading members of Congress. The present goal is a $1,000,000 fund, to be given by shippers and railroads. It is proposed to have Edgar N. Clark, former chairman of the Interstate Commerce Commission, head the board of governors, to be composed of representative men in the transportation world.

Senator Cummings, of Iowa, says that if it were a truly disinterested affair, nothing could be more desirable at this time than an organization having for its purpose the ascertainment and dissemination of the truth about transportation.

Such ascertainment and dissemination would mean a much clearer understanding of, and far less useless resistance to, motor transport; and motor transport should be represented on its board of governors.

Time for the Goat to Butt

A TABLE published by Utah State Automobile Association, referring to taxes, shows that though automobiles represent only 2.6 per cent of the total assessed property valuation in the state, tax levies on automobiles are 6.6 per cent of the total tax levy. On all other property except real estate within cities and towns, the tax levy percentage does not exceed and in most cases is less than that of the valuation. The automobile valuation in 1921 was $17,634,164—large, but the smallest of the various classes of property; yet it bears the heaviest percentage of taxation.

In Oregon motor vehicles represent only 4 per cent of taxable valuation, yet their owners pay 21 per cent of the state's taxes.

The dear peepul of California are to be asked to add to the tax burden of the automotive goat, next November. Why not—the goat has not protested much.

In the Pacific Northwest, horns are being lowered, however. The recent convention in Olympia indicated that plainly. It is the first real sign of well organized opposition to a situation which rapidly is becoming intolerable.

Don't Let Middle West Beat Us

EIGHTEEN states now have organizations patterned after California Automobile Trade Association. The purpose of these bodies, essentially, is internal improvement—better craftsmanship, regarding that term mechanically and commercially, in all its phases. In the Pacific Northwest, the Washington body, in its first real convention, for very good taxation reasons pioneered in strong external, political intentions.

In the main, however, the best work these organizations can do is internal. External good follows automatically. In California, most excellent progress in statewide work, supplementing local work, has been done. A "business doctor" has even been helping dealers individually, to develop as merchants. Whatever Illinois has done in that respect, apparently, the idea there is likely to be enlarged to Chautauquan proportions. It is proposed to get men who are in automotive lines themselves, and who have learned useful facts, to speak to local associations. A nine months lecture course is proposed, and so far 28 men have stated their willingness to speak.

Let us in the Pacific region not be outdone in a splendid work which began here.

If It's Wool, Say So; If Not, Don't

TO protect buyers, the vigilance committee of Automotive Equipment Association so rearranged the consciences of makers of gasket preparations that pure shellac will be labeled "shellac;" mixtures of shellac and other gums will be "shellac compound," and those containing no shellac will be "cement."

Following in the committee's footsteps, perhaps, the nation's supreme court has told Winsted Hosiery Co., to quit labeling as merino, wool or worsted, products containing other material than wool. A circuit court had made the same decision, but the company said it had been using false labels so long nobody was deceived, and got a court of appeals to reverse the circuit court's decision. The supreme court, however, intimated—in very dignified, judicial verbiage, of course—that new suckers are born every minute and should be protected, certain sellers' and judges' opinion to the contrary notwithstanding.

Suckers and square shooters will like such news. The world has not gone plumb crooked; in fact when it comes into complete possession of good sense it will be 100 per cent straight.

Because every business and profession gains through the use of the automobile, it is vitally important that the distributor and banker co-ordinate their efforts for mutual interests.

Let's Take a Stroll Together

LET'S take an hour off the regular, some Sunday morning, and get into old duds, and walk. Frinstance, across lots and Sunset Boulevard and its constant stream of motor cars, toward Edendale a ways, then up, up, up. No hurry. Just one foot after the other. The sun's up, too, and this pipe smoking habit gets a fellow's wind a bit. Good training for a Mount Baldy climb.

Inside of 30 minutes we're on the highest point in the vicinity. A variety of homes, singly and in clusters, on the way, but the top remains natural. Once there was a ranch home there. It burned down several years ago and no trace remains but a deep cistern. Just beyond there's a grove of eucalyptus, on the north slope of the hill, on almost a 45 degree angle down to Silver Lake, a reservoir of water we hooked from the Owens River country.

Sit down in the shade. Delicious! So is the cooling zephyr that comes in from the sea. Can't see the sea today. Too much moisture in the air—the moisture that keeps the Pacific Southland alive by day, and refrigeratingly delightful at night, in the brown season. Remarkable—we're as far south as Algiers, you know.

Away off north is the Sierra Madre Range. Nearer, through a great cleft, San Fernando Valley is visible, its houses distinguishable though ten miles distant. Still nearer, smaller hills. Just below, beautifully blue, the lake, with a partial fringe of trees and an encircling road. Not a motor car. Restful quietude.

On a height to the right, the pretentious residence of an actor, a famous impersonator, who recently had something or other taken from him, doubtless hoping cutting out an effect of wrong living would cure the wrong living—which it didn't, because he's been on the table since.

At the left, near the shore, children romping under a tree, close to an isolated country cottage, stowed away there like the "Wee Hoose Amang the Heather."

Closer, at the left, a small hillside ranch across the valley, growing oats, mostly. On that slope and in the valley deep below us, here and there are dark spots—cows or horses, dozing or grazing. A boy leading a cow. Two boys leading horses.

Then the sounds. The whispering trees around us. From afar, two roosters holding a long range crowing contest. Not so far, the inimitable piccolo melody of a meadow lark. Across the water comes the cooing of a couple of doves—the birds that never get divorced. From the ranch, the whinny of a horse. If it were duck time on the lake we could see them—flyspecks—and hear 'em quack.

Pipe's out. Let's go back. As we drop down the hill we hear sounds of "civilization"—the sweetest a hymn being sung in a church—and presently look down again on Sunset Boulevard and its constant flow of motor cars.

We snip off a pungent pepper tree twig, or inhale the hyomei odor of a velvet eucalyptus leaf, and ponder: Would we swap this—this wealth of sights, sounds, silences and fragrances—for a million bucks a month back East?

Not in a thousand years.

If every worker did more than he is paid to do and every employer paid more than he is compelled to pay, we would have no strikes.—Stansifer in L. A. Times.

Goodyear Directors Ready for Probe

Mrs. L. T. Weiss, of Cleveland, is suing for a court probe of the $30,000,000 refinancing arrangement between the Goodyear Co. and New York bankers. Dissipation of assets is charged. Goodyear directors say such review is entirely acceptable. A question in Akron is—'Who's behind the skirt?"

Calendar of Coming Events

Aug. 26-Sept. 9—Motor Vehicle and Accessory Exhibits, California Pageant of Progress & Industrial Exposition, Exposition Park, Los Angeles; Auspices Los Angeles Chamber of Commerce. John S. Berger, Show Manager.

Sept. 2-10—Annual Show as Part of State Fair, Sacramento. Royal Miller, Manager.

Sept. 4—Labor Day Dirt Track Race, San Luis Obispo.

Sept. 4—Pike's Peak 30 Mile Race, Colorado Springs, Colo.

Sept. 4-9—Spokane's Annual Automobile Show, in connection with Spokane Interstate Fair. B. J. Garnet, Manager.

Sept. 6—Labor Day Race, Uniontown, Pa.

Sept. 7-Nov. 15—Automobile Exhibit, Rio de Janeiro, in connection with Brazil's Centenary Exposition.

Sept. 9-16—Automobile and County Industrial Show, Modesto, Calif., under auspices of Stanislaus County Auto Tradesmen's Assn.

Sept. 13-15—Sixth Annual Fall Convention, Motor and Accessory Manufacturers Assn., Hotel Lafayette, Buffalo.

Sept. 15-20—Annual Show at The Hague, Netherlands.

Sept. 16—Opening of New Track at Kansas City.

Sept. 25-Oct. 3—Automobile Show, Kaiserdamm Hall, Berlin, Auspices German Automobile Mfrs. Assn.

Sept. 27-30—Automobile and Accessory Exhibits, Orange County Fair, Santa Ana, Calif.

Sept. 30—150 Mile Race, Fresno, Calif.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-8—Automobile Show, Ventura County Fair; Ventura, Calif.; Paul Hutchinson, Manager.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Oct. 17-21—Automobile and Accessory Show, County Fair Grounds, Pomona, Calif.; Auspices Citrus Belt Automobile Trades Assn. James E. Granger, Show Manager.

Oct. 18-20—Convention of National Assn. of Farm Equipment Mfrs., Chicago.

Oct. 26-27—National meeting of Society of Automotive Engineers, Detroit.

November—Tent Show by Motor Car Dealers' Assn. of Los Angeles.

Nov. 3-11—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 13-18—Automotive Equipment Assn. Annual Show, Chicago.

Nov. 30 (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

December—Automobile Show, Pasadena, Calif.; Auspices Motor Car Dealers' Assn. Earl C. Lindley, Secretary.

Jan. 6-13—National Show, Grand Central Palace, New York.

Jan. 6-13—Automobile Salon, Hotel Commodore, New York.

Jan. 8-13—Second National Show, Automobile Body Builders' Assn., 12th Reg. Armory, 62d St. West of Broadway, New York.

Jan. 27-Feb. 3—National Show, Coliseum and First Regiment Armory, Chicago.

Jan. 27-Feb. 3—Automobile Salon, Chicago.

Apl. 16-21—11th Annual Convention, United States Good Roads Assn., and United States Good Roads Show of Machinery and Material, Greenville, S. C.

Apl. 19-20—7th Annual Convention, Bankhead National Highway Assn., Greenville, S. C.

New Prices, Yet Refinements

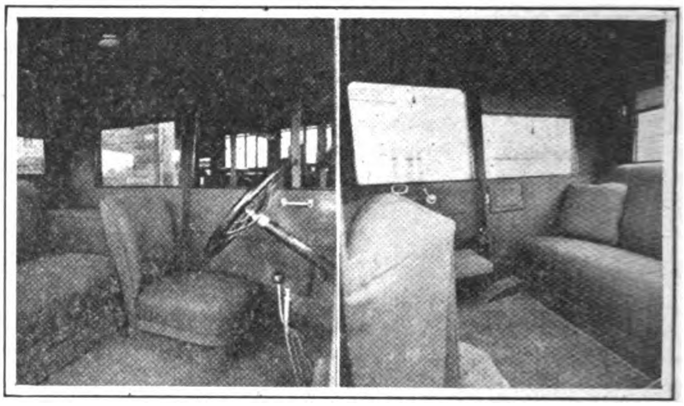
Affiliated Plants Make Possible Low Figures On Lexington Series 22 Line of Closed Cars

REPRESENTING not only a new conception of comfort and refinement, the new series 22 closed car line of the Lexington is remarkable not only in the extremely low price of each model but in their assurance of economical operation and upkeep. The new line represents months of study to meet the changed conditions in the industry. The line includes a full 4 passenger coupe, a 5 passenger sedan and two California-top models. The manufacturing facilities such as exist at Connersville, Ind., where a number of large affiliated plants are working together, make such values possible.

The coupe, for example, at $2345 is regarded as a wonderful closed car value. It combines beauty with utility—a full 4 passenger car, yet with abundant luggage space for shopping trips. A car of peculiar appeal to women, with such conveniences as the one-finger emergency brake, cable service brake and other features—and the Ansted engine. Its remarkably smooth-flowing power also gives this car instant appeal for men. Physicians and salesmen, especially, will welcome the ample storage space.

The new sedan is an ideal family car, with fixed accommodations for five persons, and two taxi seats for extra passengers, which fold away flush in the back of the front seat when not in use. Ample provision for ventilation; wide, deep seats; hassocks in place of the ordinary foot rests, are only some of the refinements.

Last but not least is the series 22 California Top. Lexington's exclusive built-in windshield eliminates all ugly bulges and crude corners where the top fits around the windshield. More than that, the glass in the four doors is fitted with sash drops so that the French beveled plate glass may be lowered for ventilation. For strictly summer use all door panels may be removed easily and quickly. Storm curtains are provided. A remarkable fact about this new car is that it sells for only $300 more than the series 22 touring car, making the differential one of the lowest in the industry.



LEXINGTON SERIES 22 FEATURES. AT LEFT, COUPE INTERIOR. AT RIGHT, THE SEDAN'S INTERIOR.

June Exports Register Increase

Exports of automotive products during June, valued at $15,063,717, registered a gain of 25 per cent over exports during May, valued at $11,967,614 (automobile engines have been included in the exports for both months) according to the Automotive Division of the Department of Commerce. June exports of automotive products amount to approximately three times the shipments during the first month of the year, the total having been $5,058,409 for January (the latter figure, however, not including engines). In contrast to the increase of truck shipments during May as compared with April, the increase during June was shown in the passenger car exports, 7818 of the latter having been exported at a value of $5,807,226, an increase of 15 per cent in number and 17 per cent in value; exports of trucks decreased 6.9 per cent in number and 3.2 per cent in value as compared with May, 1121 having been shipped during June, at a value of $786,279. Automobile engine exports, numbering 8852 valued at $831,401, increased 58 per cent in number and 34 per cent in value, while parts exported to the value of $4,089,772 beat May 29 per cent.

The unit values of both passenger cars and trucks increased slightly—the former increasing $18 and the latter $26, the average value of passenger cars exported having been $742 and that of trucks $701. The unit value of motorcycles exported was $256—a $12 decrease, 1973 motorcycles having been exported, at a value of $506,174, an increase of 16 per cent in number and 11 per cent in value.

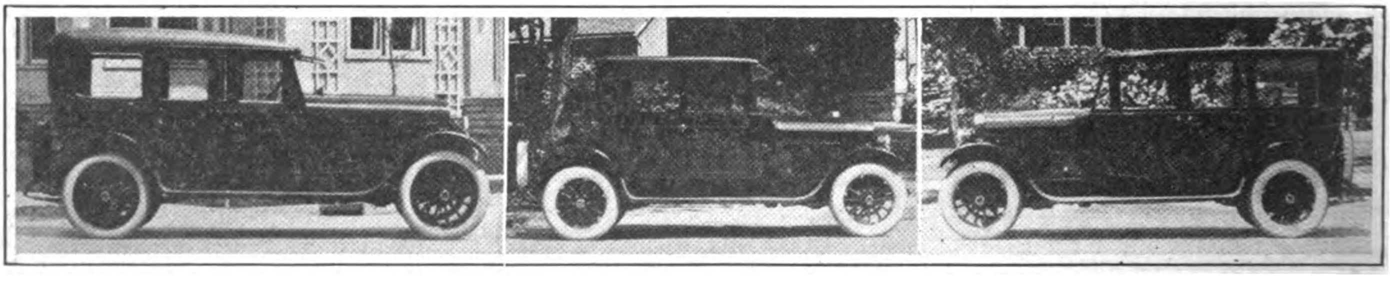
July Shipments Record for Month

Shipping reports to the National Automobile Chamber of Commerce, 90 per cent complete, indicated that July shipments from all factories would reach a total of 28,412 carloads, 28,022 driveaways and 6855 by boat. On this basis it is established that 246,600 passenger cars and trucks were produced by all makers in July, exceeding July, 1921 by 39 per cent and the best previous July (in 1920) by 20 per cent. The decrease under June, of 14 per cent, is seasonal, and expected. This is a record for production in July and is the third largest single month's production in the history of the industry, being exceeded only by the two preceding months. The factory shipping figures for all manufacturers are:

	—Carloads—		-Driveways-		—Boat—	
	1922	1921	1922	1921	1922	1921
January	15357	6485	7479	3185	143	93
February	19636	9986	10173	7507	180	99
March	27753	16287	16917	9939	560	75
April	31334	20187	22381	14197	2960	1619
May	33416	18608	28827	15193	7406	2381
June	34230	20269	33857	18834	7737	3947
July	*28412	19514	*28022	15533	*6855	3726

*July, 1922, partly estimated.

A visitor to Algiers, "the wonderful white city on the north coast of Africa," says many fashionable women in its Arabian part carry canes and remarks: "I reckon it is an adaptation of automobile precaution—carrying a 'spare' in case of leg trouble."



THE NEW LEXINGTON SERIES 22 LINE OF CLOSED CARS. AT LEFT, THE CALIFORNIA TOP. CENTER, 4 PASSENGER COUPE. RIGHT, SEDAN.

Earl Custom Roadster Here

New, Highly Individual Car Available in Three Styles of Paint and Upholstery, at $1485

ANY latent poetry there is in a man who designs motor cars usually comes out in the roadster he adds to his line. Of all the other models he plans and tailors he may be able to think as passenger cars that work their way, so to speak, by transporting the entire family or serving strictly business purposes. When he lays down the lines of his roadster, however, he sees visions—the green open country, framed in the windshield, blue skies above, and hills or mountains on the horizon, beckoning him to come and conquer.

That must have been the spirit in which the Earl Custom Roadster, a highly individual car, now making its first appearance, was conceived. Contrary to usual practice, it costs more than the Earl touring car—$1485—and it violates other precedents of its price class by giving its prospective owner three choices in the matter of paint and upholstery.

Smart combinations they are, too—horizon blue with vivid blue and black striping, mustard with blue striping, and Earl gray with blue striping; and black wire or disc wheels—the latter likely to appeal especially to the man or woman who wants a distinctive personal car, yet leans toward quiet harmony rather than an arresting color scheme.

Seat cushions, door and body panels are all in genuine leather, harmonizing with the body paint. Radiator, lamps, the marine-type ventilators on the cowl, windshield frame and standards and like fittings, are in polished nickel. The individual steps are of polished aluminum with rubber inserts; the instrument board and steering wheel are black walnut. An interesting feature is the left hand ignition and dimmer switch, which makes night driving easier on main roads. Five wire or disc wheels with cord tires are regular equipment. Appointments are exceptionally complete.

The Custom Roadster is powered by the responsive, long-stroke Earl motor; inside the frame the chassis is the standard Earl product. Its over-all length is 14 feet, less one inch. It strikes a happy balance between spacious comfort, utmost driving ease and notable economy. Ready for the road, the car weighs 2460 pounds.

The driving compartment is 56 inches long. The width of the seat is 42 inches, the depth is 18½ inches above the floor boards. From seat cushion to steering wheel is 8 inches, from back cushion 15 inches. Side rails are 10 inches above seat. Luggage space at back—20 cubic feet—gives ample room for golf bags and week-end kits, accessible by tilting the back of seat forward, making compartment dust and waterproof. Doors are extremely wide for easy entering.

Ford to Close and Fight Coal Men

Henry Ford announced August 26 his plants would close September 16, as his start in a fight against alleged holdup methods of coal brokers; and with the families of workingmen in mind, it is stated. The brokers, it is said, have large stocks, hence mines, many of which have been offered to Ford, are worth little. His action is that of a very large user simply refusing to buy coal; his intent, logically being to force down prices. Incidentally, it means laying off thousands of Ford employes. Ford notified 1900 houses that supply him with materials to stop shipment.

August 29, Secretary of Commerce Hoover said Ford's costs at present coal prices are only $1.50 a car extra. Ford replied: "Does Mr. Hoover think we should pay $7,000,000 to $10,000,000 extra to the profiteers?" Ford uses about 3800 tons of coal a day.

A number of other Detroit plants that generate their own power are said to have 60 to 90 days' supply of coal; and it is said Ford's production has been at about the limit and that the shutdown will give the sellers of Ford cars a chance to absorb accumulated output.

Detroit news, August 28, was that virtual paralysis of construction enterprises loomed, and that work on several large jobs already had been suspended, due to coal shortage.

August 27, coal freight rates from Ohio mines to Akron were ordered cut 10 per cent, by the state's public utilities commission, under Akron pressure.

Indiana news, August 13, was that an ice and coal company in Columbus, and a heating and lighting company in Hope, were using corn cobs as fuel, to conserve coal. Omaha news, the same day said: Nebraska farmers will burn corn instead of coal this winter, and save money by it. Nebraska produces no coal, no oil, scarcely any wood. Corn for fuel, the dispatch stated, was being grown on 7,500,000 acres.

Cleveland news, August 14, said July showed the first decrease of the year in employment, in 100 plants there; a drop of 3850 persons from the 84,198 employed June 30. This was not charged to coal shortage.

Chicago news, August 18, was that coal shortage had caused the leading steel producer in the district to drop from 83 to 67 per cent of capacity.

Fuel Cut Saves Motorists Much Coin

Motorists of the United States were saved many millions by the recent 2 cent cut in the price of gasoline, it is estimated. Estimates of fuel consumption per motor vehicle range from 350 to 450 gallons annually. At the former figure, according to Bureau of Mines reports on total domestic consumption, the saving to each motorist on a 2 cent cut is $7 annually, and to 10,500,000 motorists $73,500,000.

A reduction in gasoline prices is beneficial particularly to farmers, who not only own one-third of the motor cars, but also use 2,000,000 gasoline-consuming stationary engines.

Maxwell and Hupp Reduce Prices

A wire from Maxwell Motor Sales Corp., Detroit, August 25, announced a reduction of $150 on the sedan and coupe. Prices on open models remain as now. Demand for the new series of the good Maxwell, introduced ten months ago, has been particularly good for the sedan and coupe, resulting in increased production, and manufacturing economies which are passed on to the public.

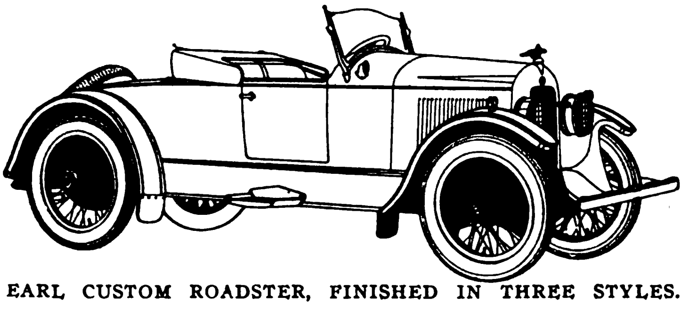
On August 4, reductions ranging from $100 to $200 on the Hupmobile line took effect.

United States Rubber Bonds Offered

A United States Rubber Co. bond issue, $7,000,000 at 6 per cent, is being marketed by Kuhn, Loeb & Co. at 90¼. The idea is to redeem, in December, $6,000,000 of 7 per cent notes, thus reducing interest charges $70,000 a year.

Washington to Probe "Gas" Again

Recent Washington news was of a "sweeping investigation" of gasoline prices, by a special sub-committee of five Senators.



EARL CUSTOM ROADSTER, FINISHED IN THREE STYLES.

New Stutz a De Luxe Sport

Two - Passenger Speedway Roadster Good for Town Use or Touring, Has a Wealth of Equipment

AN attractive new model, introduced by Stutz Motor Car Co., Indianapolis, as an addition to its line of open cars, is the Speedway Roadster, a distinctive 2 passenger de luxe sport car, replete with refinements and appurtenances that adapt it equally well for either touring or town use. A wealth of equipment is provided. Every comfort and travel requirement is subserved. The cars are furnished in a wide variety of beautiful shades, with upholstery to match, so that the purchaser can exercise his personal preference to the utmost.

The new car is priced at $2760 f. o. b. factory, fully equipped. Like all other models, it has the famous Stutz "D-H" engine and special compensating spring suspension. It is one of the outstanding creations in the Stutz line and embodies all of the traditional Stutz characteristics for speed, power, acceleration and easy riding comfort.

One of the striking features is the sizable circular trunk, which fits into a specially designed well in the rear deck of the car. This is of substantial bass-wood, covered with patented leather duck, bound at the sides and ends with heavy genuine leather, and fitted with nickel trimmings. Inside it is lined with cretonne and holds two large suitcases.

In addition to the distinctive barrel-type headlamps and spotlight, which are standard equipment on all Stutz models, the Speedway Roadster is provided with two small cowl lights of a design that correspond with that of the headlamps, and a parking lamp mounted on the left rear fender.

Two extra wheels, equipped with cord tires, are affixed conveniently at the rear. They have weatherproof tire covers of moleskin which is emblazoned neatly with the Stutz crest.

Other conveniences for comfort and safety are the heavy double bar bumper, special plate glass side-windshields, adjustable cowl ventilator, automatic windshield cleaner, rear view mirror and individual scuff and step plates.

From Goodyear Semi-Annual Report

As a striking index of improving business conditions the Goodyear Tire and Rubber Co., in its semi-annual statement issued August 1, reports a larger number of automobile tires sold during June than in any month in the history of the company. Citing the fact that production and sales for the half year ending June 30 had exceeded those of the same period last year, materially, President E. G. Wilmer's report added:

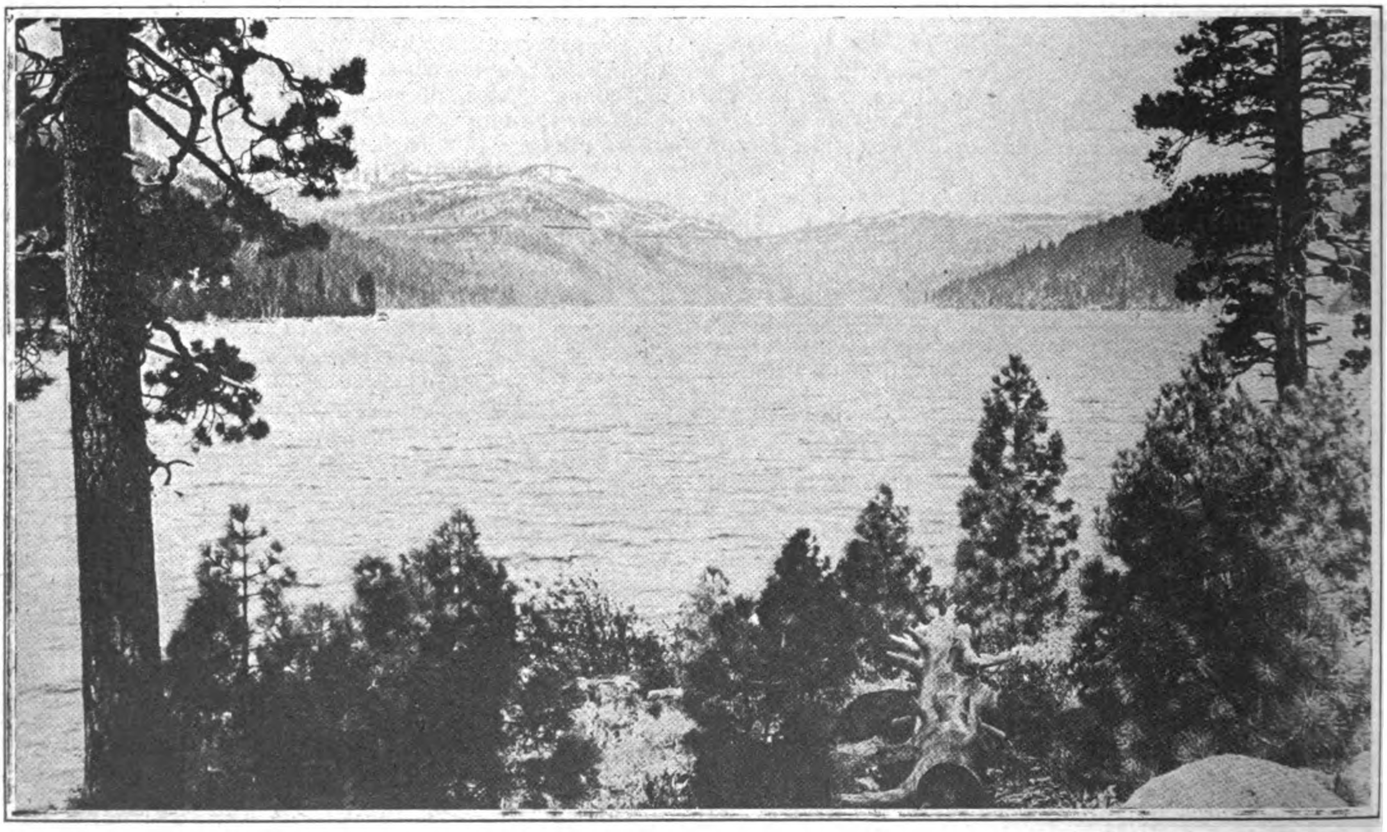
"Goodyear sold and delivered 779,590 automobile tires in the month of June, 1922. This is a new high record in Goodyear history and exceeds the previous monthly peak record of 734,948 in the month of March, 1920.

"Net sales (exclusive of subsidiary companies) were $51,410,240. Net earnings available for interest and other charges were $5,501,793. The balance after all charges, amounting to $1,915,889, has been credited to surplus with a resultant surplus on June 30 of $5,535,933. Cash, U. S. treasury certificates and other marketable securities were $18,151,092.

"Neither the company nor its subsidiaries have any indebtedness to banks. The ratio of current assets to current liabilities was in excess of 10 to 1.

"Subsidiary operations (including export) are again on a profitable basis and contributing substantially to company earnings."

Beating railroad trains to grade crossings continues to be a favorite sport with many Sunday automobile drivers. A peculiar and deadly form of insanity it is—Chicago Journal of Commerce.



BEAUTIFUL DONNER LAKE, ON LINCOLN HIGHWAY, ON WESTERN SLOPE OF THE HIGH SIERRAS IN CALIFORNIA.

Taxing Producers Don't Pay

France and England Suffer, Canada Is Wise, Japan Awakes, Regarding Motor Transportation

HIGH and discriminatory taxes on motor vehicles are proving injurious to motor transportation of certain foreign countries. This is strikingly illustrated in Japan. The authorities of Tokio, apparently seeking revenue, raised the motor tax by 50 to 80 per cent. The operating costs became excessive and many cars were retired from service. At the time there were 5000 in use. Upon promulgation of the law, 600 licenses were returned and a like number of cars were placed in storage. A major problem of Japan, that of congestion in cities, was made more difficult of solution by this decrease in modern transportation.

The central Japanese government, realizing the error, recently sent an official to the United States to study our traffic arrangements. His conclusion was that Japan can solve its problems of congested cities best by encouraging motor vehicle transportation. Removal of excessive taxes as the first step and action in that direction may soon be recommended officially to the prefectures throughout Japan.

In France, the demoralization of the automobile industry is traceable directly to high taxes. Although French manufacturers have an unusual advantage in their home market because of an import duty of 45 per cent, they are still unable to keep their factories reasonably busy. The numerous and high taxes make operation of any type of motor vehicle exceedingly expensive and many persons, whose occupation might make use of an automobile prerequisite, have to forego its timesaving advantages and do their work in a less efficient manner.

The automobile situation in England is similar to that of France. Motor vehicles, despite their utility value, which was emphasized especially during strikes, are taxed. The inequity of this assessment is being demonstrated by experiences of automobile owners, who are urging a modification or a repeal.

A contrast from that of these three countries is the taxation policy of Canada, where motor vehicle taxes derived by the provinces are devoted to the maintenance of roads, and where the central government imposes no discriminatory taxes. Canada's motor vehicle registration, 463,000, is nearly as large as that of the mother country, which has 497,000, although the Dominion is much smaller than the British Isles in wealth and population.

A Little Brother to the Roamer

Barley Motor Car Co., Kalamazoo, Mich., is the latest concern manufacturing a high priced car which has decided to invade the medium price field. Announcement of plans to manufacture a smaller machine was made in an address before the Kalamazoo Exchange Club by George Hopkins, secretary of the company. The new car will be given a new name, to distinguish it from the Roamer, the present product. Mr. Hopkins refused to give any details concerning the new car, but said plans and specifications have been completed.

The New Marmon 7-Passenger Phaeton

The new Marmon 7 passenger phaeton is regarded by Nordyke & Marmon Co., Indianapolis, as "mechanically the greatest and artistically the most beautiful car ever built"; the embodiment of Marmon ideals of workmanship known the world over during 71 years, and of Marmon automotive theories developed painstakingly during 20 years.

It has the Marmon beauty, strength, power. Its engine and chassis show no changes except minor refinements. In the body, there is a slightly lower hood, straighter lines from front to rear, an inch more length and 4 inches less over-all height. It has light weight, balance, ease of riding—the well known Marmon roadability.

The panorama top is a prime feature—stationary, braced at corners, but light and flexible as the ordinary top. The absence of the usual supporting bows gives all passengers a clear view to the front and sides—a veritable panorama of the passing countryside.

The longer body, and lowering the front and rear seats—thus affecting the slant of their backs—increases roominess and comfort materially. This benefits those using the auxiliary seats as well. The car has the characteristic Marmon convenience of controls and tools.

Big M. & A. M. A. Doings Ahead

At the fall convention of Motor and Accessory Manufacturers' Association, in Buffalo, September 13-15, there will be special meetings of the credit, advertising, traffic and export divisions throughout the three days' sessions. President E. H. Broadwell, who is general manager of Fisk Tire & Rubber Co., will direct the general sessions. Among those on the general committee of the credit managers are M. A. Moynihan, treasurer Gemmer Mfg. Co., Detroit, and T. E. Challenger, credit manager McCord Mfg. Co., Detroit. W. Clark, Clark Equipment Co., Buchanan, Mich., chairman of the M. & A. M. A. advertising managers' council, will preside at the advertising sessions.

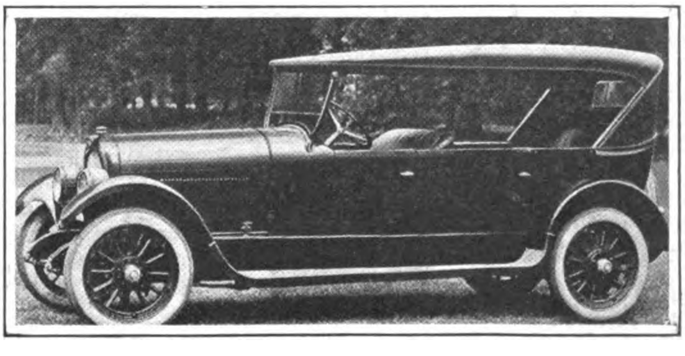
Speakers listed for this year's convention will include Alfred Reeves, general manager of the National Automobile Chamber of Commerce, who will talk on Trends of the Industry and the Outlook for 1923. C. A. Dana, president of Spicer Mfg. Co., will discuss Integration and Mergers in the Automotive Industry, and T. M. Simpson, credit manager of Continental Motors Corp., will tell how Creditors Can Aid in Rejuvenating and Reorganizing Embarrassed Companies. Two bankers of international repute are also to be heard.

To Clarify Disc Wheel Rights

Suit has been filed in the United States district court, Chicago, by the Detroit Pressed Steel Co. against Forsythe Brothers Co., Harvey, Ill., for alleged infringement of patents on disc wheels, held by the Detroit company. Carl H. L. Flintermann, vice president of the plaintiff company, declares the suit has been filed without malice and with no intention of hampering the wheel industry in general, but to clarify the situation relative to the patents issued for this type of wheel.

New Saxon Refinancing Plan

Stockholders of Saxon Motor Car Corp. have approved another refinancing plan—to retire and cancel the present $1,000,000 preferred stock, and issue $200,000 shares of new common of no par value. A banking syndicate has agreed, the company states, to underwrite the new issue for $750,000 cash and the $1,000,000 preferred. The banks now hold the preferred. The company is planning to build a new six-cylinder car to sell under $1000.



NEW MARMON PANORAMA-TOPPED 7 PASSENGER PHAETON.

Ideal Section Being Built

Lincoln Highway's Model Road Expected to Be Paved By November and Beautified By Spring

SURVEYS for the Ideal Section of Lincoln Highway, in Lake County, Ind., about 40 miles south of Chicago, were completed last autumn. Now contract for its construction has been let and work is under way; and it is expected to be paved by the end of October. On a 100 foot right of way, the 40 foot road will have at each side a wide parkway, beautified; there will be no side drainage ditches to endanger travel; and for the safety of pedestrians there will be a path at one side. For night travel there will be plentiful lighting. The lighting, beautifying and other details are to be finished next spring.

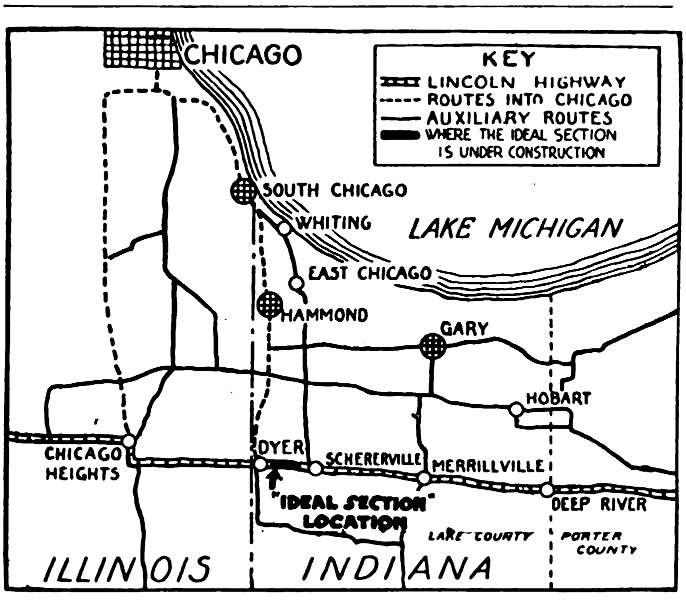
The stretch of about 5 miles will cost, with all apurtenances, about $100,000, the funds to be provided jointly by Federal aid, the state of Indiana, Lake County, and Lincoln Highway Association, the latter's share being donated by United States Rubber Co.

The design is for a depth of 10 inches of reinforced cement concrete, capable of sustaining a traffic of 20,000 vehicles per 24 hour day. Heavily laden trucks will carry 25 per cent of the traffic, it is estimated.

The idea is to have, as a pioneer example worthy of emulation, a stretch of highway consistent with the needs of the future, yea, even of the present day, as to width, depth, strength, drainage, safety and beauty—the latter not the least object in view, and one which has received too little consideration in highway construction in this country. It is felt that as this object lesson is absorbed elsewhere, to that degree will the many millions of dollars spent on highways yield the most, economically, esthetically and with respect to safety. The gradual evolution of the entire Lincoln Highway to this standard, as traffic increases, is hoped for.

Realization of the idea was made possible through the generosity of United States Rubber Co. J. N. Gunn, vice president of that company, is president of the United States Tire Co. and of Lincoln Highway Association. His personal interest in the project has been keen.

In preliminary research and detailed work, during nearly two years, eminently capable men have given generously of their time. In the design of this remarkable stretch of highway is embodied the mature thought of 15 of the foremost experts in highway engineering and construction, and related problems, in the United States. Acting without recompense as the technical committee, they have developed the general plan, and it has been carried to detailed completion through collaboration of the engineering department of Indiana's state highway commission; C. Gray, Indiana state highway engineer; Lockwood, Greene & Co., engineers; and W. G. Thompson, former New Jersey state highway engineer. Mr. Thompson is Lincoln Highway Association's consulting highway engineer.



MAP SHOWING LINCOLN HIGHWAY'S IDEAL SECTION.

To Stop Exports of Stolen Automobiles

A nationwide movement to interest Congress in adopting an amendment to the Federal automobile law which now makes it a felony to take a stolen car across a state line, has been started by the National Auto Anti-Theft Association, headquarters Times Building, New York.

The proposed amendment would prohibit the export of any automobile until, and forbidding any steamship line to issue its bill of lading for the transport of any automobile, whether or not boxed, until its motor and factory numbers are certified by an inspector of customs as intact and recorded; and further certified not to be on the list of stolen machines which would be required to be kept posted in the office of the collector of customs of each port of entry in the United States.

All trade organizations affiliated with the industry, and all automobile clubs, are being urged to use their influence with their own Congressman for the adoption of such an amendment to the present Federal law, so as to close an important outlet of professional automobile thieves in exporting their spoils to confederates at foreign ports.

About 750 chambers of commerce, boards of trade and trade organizations, and about 300 automobile clubs, are said to have been nominated as associates of the National Auto Anti-Theft Association. The joint co-operation of all for the enactment of legislation for the more uniform protection of car owners in the various states by concentrated effort carefully directed on uniform lines should be productive of good results.

Equipment For Tourist Camps

Cities and towns, large and small, are providing camping grounds for cross-country motorists. Not only in summer, but late as heavy frost in the fall, these conveniences are used extensively. In Southern California and other places where the winter is mild, camping grounds have year 'round patronage. The better the grounds are equipped, the more tourists are attracted.

If the camping ground is to be a permanent affair, its equipment should be, so far as possible, of weather resistant, fireproof construction, and sturdy enough to withstand hard usage. Up to the present very little in the way of suggestions or directions for building such equipment has been available, although the demand for this information has been very great.

The average camp ground, to be considered well equipped so far as permanent pieces are concerned, should have all of the following: Sign and light posts; tables and benches; drinking fountain and provision for water; outdoor toilets with sanitary vaults; cook stoves; refuse and garbage burners and boxes; outdoor shower bath; car washing or repairing platform.

Designs for constructing this equipment of concrete are shown in illustrations obtainable from Portland Cement Association, 111 Washington St., Chicago.

Tire Prices Believed at Bottom Now

Tire prices will not be dropped further this summer or fall, is a belief uttered from Akron a few days ago; yet an "authority," unnamed, is quoted as saying experiences of the past 18 months make it impossible to be positive. However, some day next spring will see advances. The recent cuts are stated to have averaged about 10 per cent on cords and 15 per cent on fabrics.

Murder will out, even when the victim is time.

Highway Matters

Eliminating Grade Crossings

What can be done when a community sets out to rid itself of the menace of railroad grade crossings is shown by the plans for a Federal aid road to be constructed in Alabama, between Ariton and Clayton. In a distance of about 25 miles the old road crossed the railroad 14 times. By good engineering 13 of these crossings have been eliminated, the remaining one being in a small town where there are only three trains a day, and these move at slow speed as they approach the station.

Some months ago the Bureau of Public Roads announced that grade crossings would be eliminated on all Federal aid highways wherever practicable. Officials of the bureau are receiving hearty co-operation from state highway departments, and the general approval of the public.

It has been found possible to revise many plans, keeping the road entirely on one side of the track or finding a suitable place where the road can cross beneath or above the track.

In some states the highway departments, on account of existing legislation, are having difficulty in inducing the railroad companies to share the cost of placing the highway above or under the track.

Conditions Threaten Highway Work

Washington headquarters of National Motorists Association has reports to the effect that highway construction is threatened seriously by the shortage of coal and curtailed transportation.

"More than 300,000 men will be thrown out of employment within the next few weeks if coal is not obtainable in that time," is the message sent to automobile clubs throughout the country by Raymond Beck, field secretary. "In a conference with Chairman Charles C. McChord of the Interstate Commerce Commission, it was pointed out that the transportation of coal is essential for roadbuilding machinery, as well as for the manufacture of highway materials. Chairman McChord has asked us to make an immediate survey as to the situation in all states. "This we have started to do, and reports so far received show that from 4000 to 30,000 workers on highways in different states will be out of employment unless there is relief."

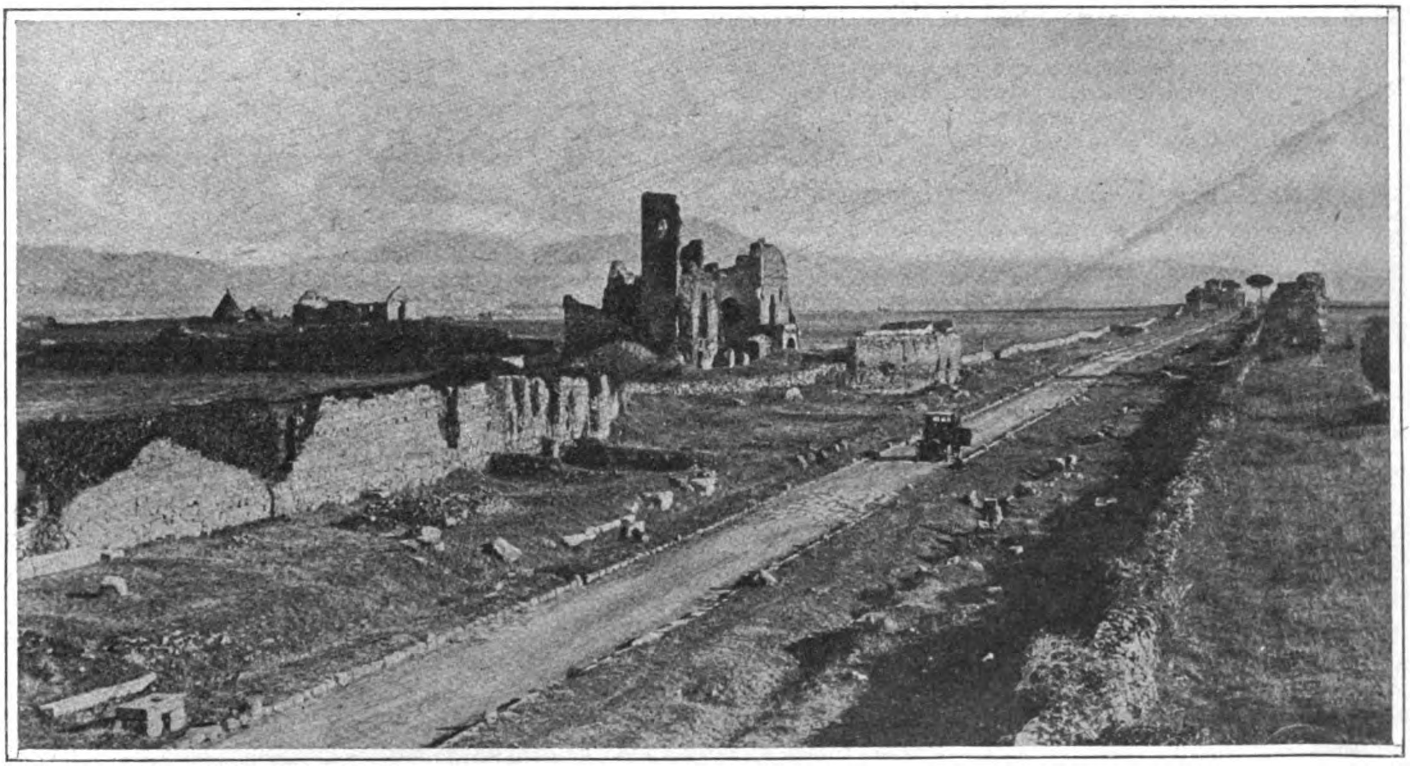
Lower Rate on Road Material

In the shipment of surplus war materials transferred to them by the Bureau of Public Roads, state highway departments are to be saved much expense as a result of a ruling of the Interstate Commerce Commission permitting its shipment as "contractor's equipment," at a low rate.

The railroads previously required the states to pay less-than-carload rates on the various items included in such shipments, even when together they made up a carload. The contention of the bureau is that as the bulk of this material has been used and none of it new, and as it is all intended for use in road construction, it should be given the advantage of the low rate allowed to contractor's equipment. This contention, which **was opposed by the railroads,** was upheld by the Interstate Commerce Commission.

The rate is applicable to some 1200 carloads to be shipped from Camp Grant, Ill., and large quantities from other points. On a carload shipment from Schenectady, N. Y., to Boise, Idaho, $720 was saved, and $500 on another from San Antonio, Tex., to Salem, Ore.

The average motor vehicle travels 21 miles daily.



APPIAN WAY, FAMOUS ROMAN ROAD BUILT MORE THAN 2000 YEARS AGO AND BEING USED TODAY BY MOTORISTS.

The most famous road is Appian Way, extending 300 miles, between Rome, near Tyrmenian Sea, which washes Italy on the west, southeastward to Brindisi on the Adriatic. On this road the Roman legions marched to take the hardly palatial transports of their day, to go to do things to the inhabitants of the Far East. This road was built by Appius Claudius, three centuries and 12 years before the birth of Christ; and it endures today. How much of it in usable condition this writer does not know, but, using a term of the present, it is known positively it has lasted "longer than the bonds," and, 2232 years after its building, a modern motor vehicle is shown in the picture to be traveling on it. The picture is printed by courtesy of Western Highways Builder. It is of interest, in this connection and to Americans who may wish—and no doubt they are many—to tour in Italy, that a chamber of commerce committee in Milan, center of Northern Italy, has reported favorably on constructing an asphalt or asphaltic concrete highway to Venice, 120 miles eastward—the "Queen of the Adriatic." Beginning work immediately is urged. Tourists and the rapidly growing motor truck traffic indicate it is a need and that it would be very profitable.

IN FOREIGN FIELDS

Increased Demand in Leading Markets

The four leading passenger car foreign markets of the United States during June took increased shipments as compared with May; Canada having imported 1807 passenger cars, the largest number shipped to the country in any one month in 1922. Sweden continues to hold second place, having taken 961 cars in June and 802 in May. Mexico took 563 passenger cars, valued at $369,531 in June as compared with 634, valued at $357,550, in May. Spain took 239 passenger cars as compared to 141, and Japan dropped from 176 in May to only 10 in June.

Both Canada and Mexico imported larger numbers of trucks from the United States while Sweden took none as compared with 307 during the previous month. Japan took 86 American trucks during June—a decrease of 42 from the number imported during the previous month.

To Enlarge American Plant in Denmark

A large American automobile manufacturing concern has purchased land from the city of Copenhagen so as to enlarge its assembling plant there, the Department of Commerce is informed by Assistant Trade Commissioner Sorensen. It is expected the plant will be ready by April 1, 1923, and that the number of employes, which at present is about 350, will be almost tripled, enabling the factory to augment the daily output of 63 cars and to supply increasing demands from the territory covered, which includes not only Scandinavia but also England, Germany, Poland, the Ukraine and the Russian Baltic states.

Japan Takes Fewer American Automobiles

Reports that European cars are gaining in popularity in the Japanese market, owing to their low fuel consumption and low horsepower, seem to be verified by the decrease in exports to that country from the United States during June, according to Department of Commerce figures. Exports of American passenger cars to Japan dropped to 10, valued at $13,178, as compared with 176 in May and 116 in April. Truck exports dropped from 128 to 86.

Producing Japan's First Automobile

On August 6 the Department of Commerce announced in Washington receipt of news from Tokio of the first Japanese automobile, a machine with three wheels called the Jitsuyo, designed by an American engineer. It is being produced at Osaka at the rate of 50 per month, by the Jitsuyo Jidosha Co. It is the result of three years work. It has two cylinders, air cooled motor and a speed of 30 miles per hour.

China Has Large Stocks of Automobiles

Manufacurers of motor vehicles desirous of entering the Chinese market should not do so within the next six months, advises Trade Commissioner Hoyt in dispatches to the Department of Commerce. The stocks of dealers, who usually handle two or three makes, are large at present and are being disposed of slowly. However, the good roads movement inaugurated in 1921 is spreadover a great part of the country, and the market in China will bear watching, he states.

The United States furnished 469 of the 859 motor cars imported into the port of Shaghai in the calendar year 1921. Great Britain supplied 132 and 62 were imported from France.

Motor Vehicles on Angolan Budget

The Angola budget for the fiscal year 1922-23 carries an item of 800,000,000 escudos—about $56,000 at present rate of exchange—for the acquisition of passenger cars, motor trucks and motorcycles. Light types will undoubtedly be desired as the roads of Angola are such that trucks weighing more than 5000 pounds, when loaded, experience difficulty in operating outside of the towns and also damage the roads which are not macadamized. American trucks are well liked in Angola.

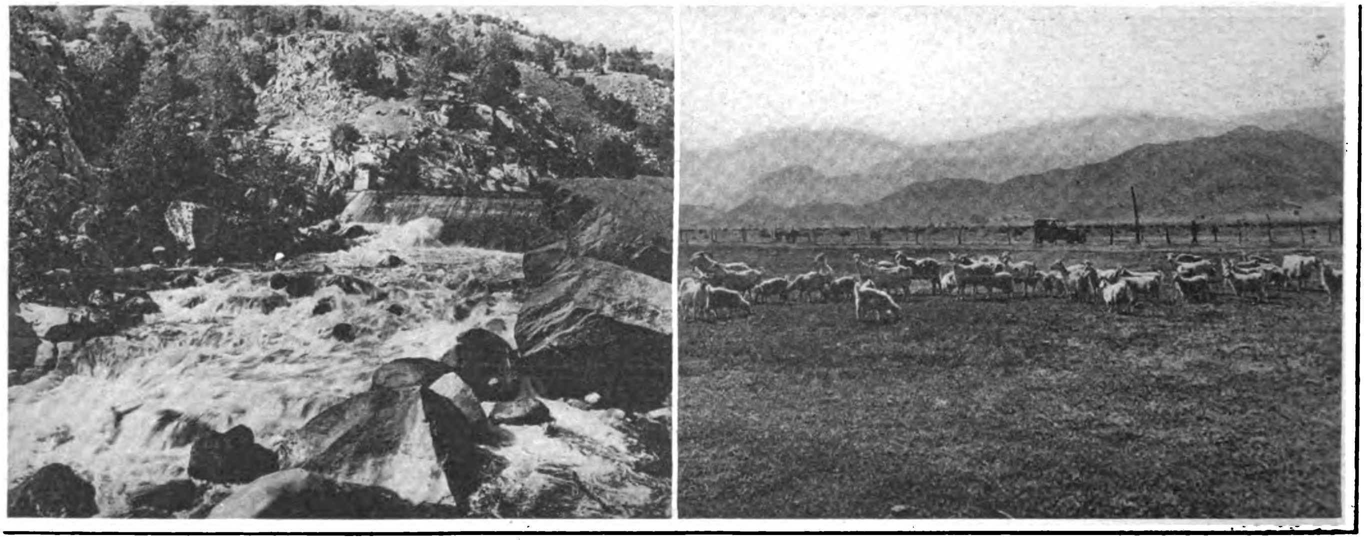
Canada's Registration Increase

Official figures issued through the Department of Railways and Canals, show 48,000 more motor vehicles were registered in Canada in 1921 than in 1922, the total, 463,848, representing an average of one vehicle for every 19 persons. Revenues from registration amounted to $7,669,493, practically all of which was expended for road improvements.

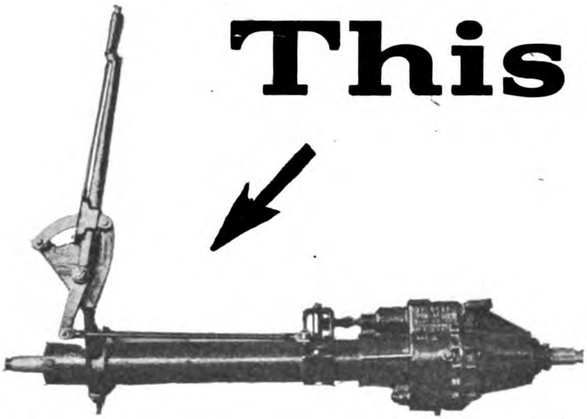
Ratio of Exports to Production

The foreign demand for American passenger cars has kept pace with production in the United States, 2.93 per cent of the cars produced having been exported in both May and June. The ratio of truck exports dropped from 4.43 in may to 1.31 in June.

At all highway entrances to Maryland are signs informing motorists concerning points of the state law and displaying speed limits and traffic rules.



SEEN FROM A VACATION CAR. AT LEFT, THE TUMBLING KERN RIVER. AT RIGHT, ANOTHER KERN COUNTY SCENE.



This Does It!

Gives You Power When You Need It!

With the AHLBERG Transmission installed in a Mack AC Truck six speeds ahead and two reverse speeds are obtained.

The standard gear ratios are reduced 62½ per cent, which eliminates the bucking and straining of the entire truck on a hard pull. Even when loaded to capacity, the truck equipped with the AHLBERG Transmission is capable of negotiating grades that previously were impossible with a very light load.

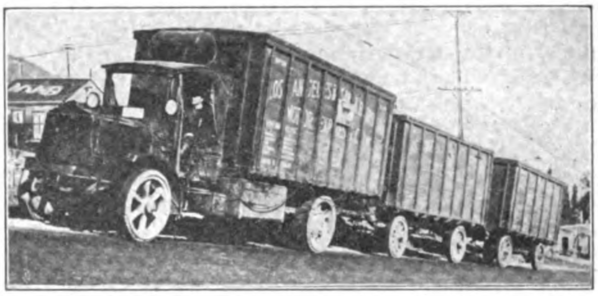
By increasing the driving sprockets after installing the AHLBERG Transmission on a Mack Truck, the road speed can be materially increased at the same time retaining plenty of power for hard pulls. Installation can be accomplished in a few hours by any capable shop mechanic. When ordering specify wheel base 156 inches, 168 inches or 180 inches.

Price, Mack AC Model, $259.37, including war tax, F. O. B. Los Angeles

We also make transmissions for the Ford, White, Dodge—Graham Bros. Truck in either under or oversize.

K. E. AHLBERG CO.

120 W. 22nd Street Los Angeles, Calif.



This One Makes Good From Start

From its very beginning, the India Tire & Rubber Co., Akron, O., has made progress. Even in 1921—generally admitted to have been one of the most adverse years in the history of the rubber industry—its sales exceeded those of any previous 12 months. In fact, within four months after its plant became operative, the company started to pay cash dividends of 8 per cent on its common stock, and it has missed only four common stock dividends. Preferred stockholders have received a 1¾ per cent cash dividend every quarter without interruption, from the time the first tire left the factory until the present, the last dividend on preferred having been paid July 1.

The company's net volume of business during the last seven months totals $1,088,000—an increase of 46½ per cent in dollars, or 80 per cent in units, over the figures for the same period last year. Net earnings from January 1 to June 30, $214,419.37 or 30 per cent on the total outstanding preferred and common stock for that period of six months.

"With 200 per cent more new accounts on our books than at the beginning of 1922—with orders coming in faster than we can fill them—we believe," says an India official, "that 1922 is going to be the most prosperous year in our history. In fact we are now, and have been for the past 90 days, constantly behind orders, in spite of the fact that our factory has been running night and day for many months. Our daily output now is more than 600 casings and 800 tubes."

Trainload of Haynes Parades in Chicago

An impressive spectacle as part of Chicago's Pageant of Progress exposition was the gigantic parade of a solid trainload of the new, improved Haynes 55 and 75 automobiles, that passed up and down the entire length of Municipal Pier and part of Michigan Ave. this morning. Mayor Thompson of Chicago, with other city officials and "Howdy" Wilcox, who established a record in the Haynes 75 blue ribbon speedster on the Indianapolis speedway, headed the parade in the "honor" car. Riding in the pilot car were Jay Colvin, and W. S. Mehaffey, president and vice president respectively of Triangle Motors, Inc., Haynes distributors at Chicago, together with Gilbert U. Radoye, director of sales and advertising for Haynes Automobile Co.

The long line of gayly decorated cars, stretching a distance of two miles, was escorted by one of Chicago's crack bands and a squadron of motorcycle police. Many of the cars were occupied by Haynes dealers from Illinois, Iowa, Indiana and Wisconsin.

The huge trainload of cars was ordered by Triangle Motors, as a direct result of the stimulus their business has received since the opening of the Pageant of Progress exposition.

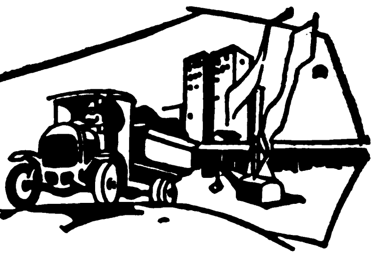
Not a Price Cutting War—MacAuley

President Alvan MacAuley, of Packard, declares the recent reduction in motor car prices mean, not a price cutting war but a readjustment by those companies which named their prices early in the year, before the trend of labor and material became entirely clear; that under present conditions, including strong demand and large production, savings can be made and passed on to buyers. Packard prices will not be changed, he says.

London Has 1600 Safety Zones

London has 1600 safety traffic zones, reports Inspector Edward H. May, chief of Cleveland police department's division of traffic. Inspector May believes the London custom of having street cars stop on the near side of the street, a practice observed in many American cities also, is helpful to traffic.

The Car of Commerce



Publicity—Use It or Lose Out!

WHAT follows is in accord with what has been printed, about the kind of publicity which motor truck and stage interests and associations in California should send into millions of homes, by means of free or paid newspaper space, at presumably many, many thousands of dollars less cost to them—and which cost as presumably would be passed on to the ultimate consumer—than the price of non-activity or less pointed publicity, in the matter of proposed higher motor transport taxes and lower maximum weights.

This is long—but it is worth reading, in view of injustice that pends. The support of the injustice by public opinion, the strongest possible factor, can be lessened if the task is handled right. What is said here as to taxes and weights is of value elsewhere than in California.

Even more pressing than the matter of weights is that of taxes. It has been told that about $65,000,000 will be needed in the next 5 years, to keep profitable the vast sum invested in California state highways. That is $13,000,000 a year. If that is so, and probably it is, not $13,000,000 but $16,000,000 a year probably will have to be raised; very likely even more, as actual costs usually exceed estimates. Half of every dollar now obtained by the state from motor vehicle fees is not used on state roads but goes to counties, to be spent by them. Last year the counties got $3,000,000 of the $6,000,000 total. Assuming that they are satisfied with $3,000,000 though it be less than 50 per cent of any radically increased taxation, presumably they will want, and need, at least $3,000,000. Add that to the $13,000,000 a year needed for state roads—total, $16,000,000.

It is proposed to raise as much as possible of the difference between about $6,000,000, raised last year, and what evidently must be $16,000,000 in each of the next 5 years if the investment in roads is not to be wrecked, by gasoline tax. The state's highway commission has mentioned 2 cents a gallon. Last year the state's motor vehicles consumed 100,000,000 gallons. A 2 cent tax would raise only $2,000,000—where will the other $14,000,000 come from? It seems clear that those who suggest a 2 cent tax are doing so to get the public—a very large preponderance of which is not composed of even private car owners—into a state of mind favorable to the gasoline tax idea. That done—up will go the proposed rate per gallon. Even 5 cents a gallon would raise only $5,000,000, leaving $11,000,000 to be raised—where? The average could not well be 5 cents a gallon—no state levies that much; it could not be put over. Oregon motorists are howling against a 3 cent tax, and doubtless the general public in Oregon is inclined to consider it unfair, when compared with the small proportion motor vehicle value forms of the state's total assessed property valuation. If California private car owners can be forced to stand a 3 cent tax, surely it will be the limit. If that can be done, perhaps semi-public-utility motor vehicles, including stages and trucks, can be made to pay 5 cents; but the average will be less, and the total inadequate.

In view of the inadequacy, the tendency will be to at least get as much as possible from motor vehicle owners, particularly truck and stage owners. That is the tendency now, and the greater need will increase it; and it is being bruited about that the state's two large automobile clubs will drop their fight to "get" the highway commission, long enough to join with it to put through a gasoline tax. Consistently, though not with good bedrock logic, the clubs, it is said and appearances indicate, favor putting a heavy tax load on truck and stage commerce. That doing this would help the railway fight against commercial development through motor transport commerce, affecting the prosperity of the many thousands of automobile club members, apparently is not considered.

So truck and stage men are where they must spend money to save it, for themselves and a shortsighted public which is the strongest factor of all and which, whatever else is done, should be reached with far more convincing publicity than is used in behalf of motor transport today. It is a case of probably being robbed, but of trying to be robbed less than by sitting still.

The basis of publicity needed in this case probably cannot be the principle of distributing a necessary tax burden in the widest manner. Though the principle is used every day, in many ways, it is not understood generally. There are many glaringly unfair, uneconomic exceptions. Its adequate adoption is far away though it is as simple as that 2 and 2 make 4. Probably, also, ton-mile taxation for semi-public-utility vehicles, found successful in Maryland and far fairer than the present rated-horsepower basis, could not be urged successfully in this case, in conjunction with the idea of taxing private cars per gallon of fuel used. One or both ideas, however, could well be mentioned, to interest and educate the public; to help carry arguments contained in facts, of which a great quantity is available, like the following,—so as to lessen the wrong that looms against motor transport as to taxation load, and secondarily as to gross weight limit.

Reducing the California state maximum limit on motor truck weight from 24,000 pounds, as at present, to 22,000, is proposed. (Counties are privileged to make the limit less than any state weight.) The proposed state change would make truck short haul service cost Long Beach, Calif., 80 per cent more, says a large transfer company there, after checking and rechecking its calculations, based on an accurate cost accounting system maintained for years. The system shows that:

One 5 ton truck, loaded to present lawful capacity and pulling one trailer, can transport loads at a cost (not price) of 10 cents per ton per mile.

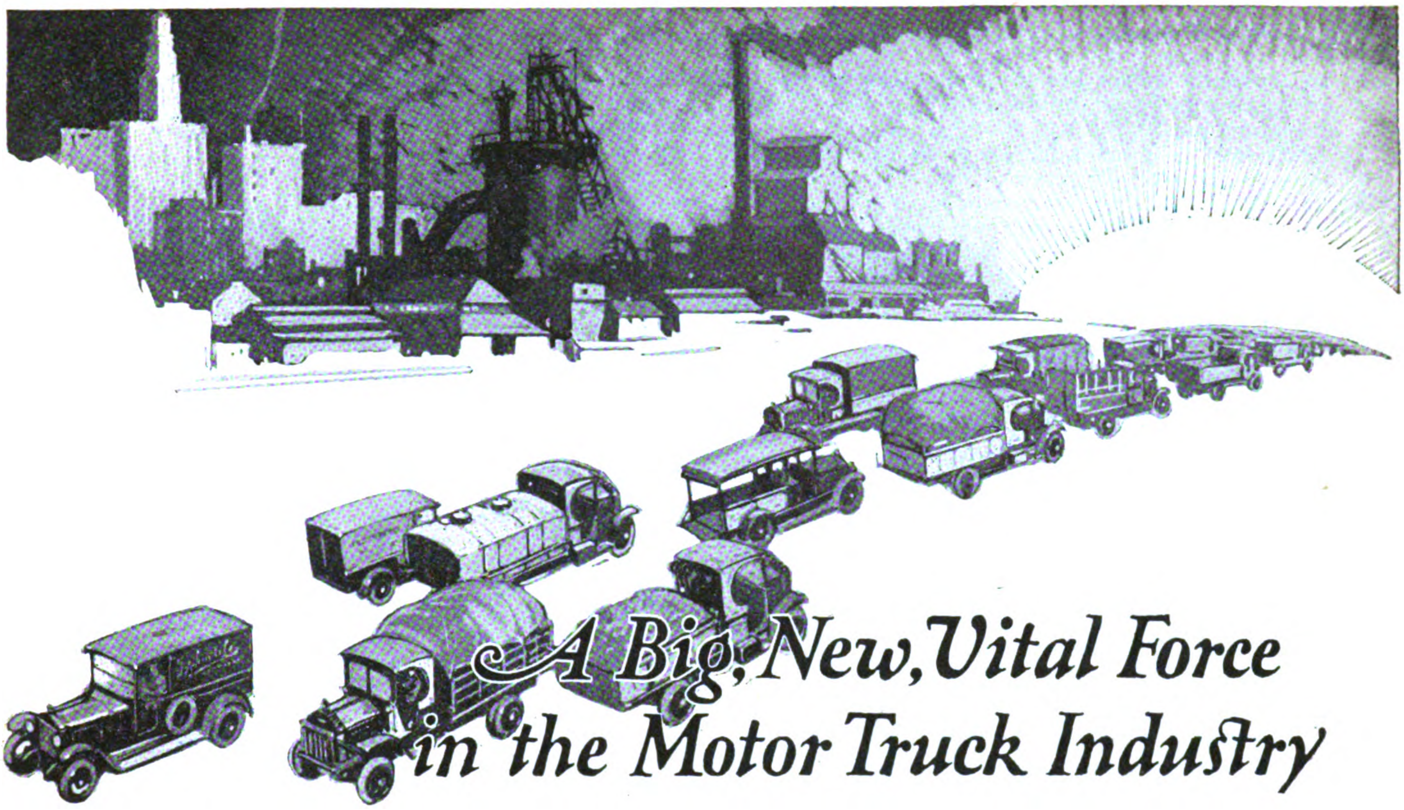
One 3½ ton truck, loaded to lawful capacity and with one trailer, can operate at 18 cents per mile.

That there is a great public demand for motor truck service is proved by the fact that a few years ago California had practically no motor trucks, and now has nearly 35,000.

Vegetables and fruits reach tables far more quickly, freshly and, presumably, cheaply, than formerly.

Motor trucks in this country are covering 7,150,000,000 miles and carrying 1,430,000,000 tons of freight per annum—equal to a railway freight train of 95,333 freight cars, each carrying 30,000 pounds, or of nearly 1907 freight trains of 50 cars each. So says the Senate committee on reconstruction and production.

Household goods and many other kinds of goods are transported more quickly, even long distances, with less


A Big, New, Vital Force
in the Motor Truck Industry

Selden

Heavy Duty Trucks

Have an international reputation for long economical service.

Full-flexible construction is engineered into every Selden detail. The motor, for example, is cradled at the front support and suspended on hinged pins at the rear supports. Shocks are thus absorbed.

In England there are said to be more Selden trucks than of all other American makes.

In America thousands of owners are demonstrating the superior dependability of Selden Trucks.

Manufactured by
Selden Truck Corporation
Division of Industrial Motors Corporation

A GREAT step forward has been taken in the motor truck industry.

It offers every man who sells, and every man who services trucks, new and important advantages in profit making.

Industrial Motors Corporation has been formed by a group of successful American manufacturers to bring together carefully selected truck companies of established reputation and to give the dealers and users of their trucks the advantages of larger resources and larger economies.

Great centralized buying power; great freight savings; greater volume of sales for individual dealers, and better service to truck owners in every locality; these are few of the determined policies.

The first divisions to be included in the organization are the old and well-established Selden line of heavy duty trucks and the widely known line of Atlas "Merchants' Dispatch" trucks.

Inbuilt qualities which guarantee satisfactoryperformance are pledged by the resources of this soundly financed organization.

Dealers will have all that any ambitious man can ask: Profit — Security — Permanency — *Opportunity.*

Now is the time to investigate. Write for facts.

WORM DRIVE ATLAS

"Merchants' Dispatch"

Has a nation-wide reputation for dependable, low cost delivery.

Truck-built, its heavier units give a strength and serviceability that insures year in and year out economy.

In every detail of design and construction the Atlas "Merchants' Dispatch" is a highly specialized speed truck which combines rugged stamina with speed and flexibility in service.

Manufactured by
Atlas Truck Corporation
Division of Industrial Motors Corporation

INDUSTRIAL MOTORS

CORPORATION

SALES DIVISION: ROCHESTER, NEW YORK, U. S. A.

bother and less if any damage, than formerly. Operating as feeders to railways, motor trucks and stages have facilitated commerce, hence the comfort of the people, tremendously, presumably at lower cost than inferior previous feeder methods.

The difference in haulage facility is shown by the fact that a truck can move 5 yards of gravel in one load a minimum of 15 miles an hour, compared with a horse moving only one yard of gravel in one load a maximum of 4 miles an hour. Calculation shows that this means the truck can haul 5 yards of gravel nearly 19 times as far in an hour as a horse can haul as much gravel. The application of this advantage of 19 to 1 to all sorts of commercial transportation indicates results of great magnitude and importance to citizens' pocketbooks, aside from their increased convenience. The first cost of the truck exceeds that of the horse, and like the horse it must have a driver, and must have oil and gasoline and care, as the horse needs food and care; but calculations based on these facts are not stated here. It is not necessary. The fact that one truck will do what would require 19 horses to do, is sufficient.

Entirely aside from economy of time and money, picture 19 horses cluttering up the highway or street, compared with the space occupied by one truck.

As commercial circumstances arise which demand it, comes the large truck, which under such circumstances offers advantages over the small truck just as the small truck offers them over horses.

It is a fact that 19 horses would damage highways more expensively, in transporting a given total volume of load a given total mileage at given speed or perhaps any speed, than one truck would.

The same would be and is true of small trucks as compared with the smaller number of large trucks required to transport a given total volume of load a given total mileage. The tests at Pittsburg, Calif., proved it.

Approximately 90 per cent of the milk consumed in Los Angeles, 75 per cent of the bread and 500,000 pounds of fresh meat daily are delivered by motor truck.

Logically, motor truck transportation, compared with horse transportation, even with railway transportation under certain conditions, should mean higher prices to the farmer or other producer or manufacturer, and lower price to the consumer.

Motor truck and stage transportation has linked cities and towns located on railway lines apart, but practically parallel. It has caused development of new, prosperous communities where there were none before, much more rapidly than occurred before the advent of motor trucks and stages.

The motor truck, in fact, has become an absolute necessity. The same is true of the motor stage for intercity travel, and the motor bus for city travel.

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In the face of such facts, strong economically and socially, it is proposed to restrict commerce by motor trucks in California by reducing the state maximum gross weight limit, the excuse being that at the present maximum they damage the roads. There has been no publication of scientific estimates, nor any estimates, as to what maximum weight smaller, lighter loads, traveling at present average speeds, should be, to prevent damage of roads as they now are constructed; and nothing has been said as to the strong probability that, despite—in fact, quite within the limits of—present speed laws, lighter loads would be transported more rapidly than present loads are, hence would injure the roads more than present loads, just as lighter trucks now move faster and injure roads more than heavy ones do.

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Also, in the face of facts showing motor trucks and stages have become necessities, it is proposed to increase taxes upon them because (1) roads have deteriorated; (2) because maintenance costs per mile are said to have risen since 1920 from $148 to more than $500 per mile; (3) because railway companies are protesting (always failing to mention the huge and valuable land grants made them as splendid pay for their pioneering) against increased taxation for any purpose; and (4) because motor vehicles offer the logically most available means of additional taxation for highway maintenance. By able propaganda the public mind is being moulded to the belief, unbacked by any scientific arithmetical facts, that motor trucks and stages are not sufficiently taxed in return for their owners' use of the highways.

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As to both the weight and tax propositions, it is quite possible, and it would be profitable, for the motor truck and stage owners to ascertain, mathematically and otherwise, what would be fair. As Motor West has stated before, the American Automobile Association and the Government, jointly, have prepared data available in computing the first factor in the proposal, and partly the second as well. Anyway, data is procurable whereby it can be stated to the public, in a manner convincingly easy to understand, what weight limits should be to meet the needs of present highway construction of various types; **what changes should be made in highway construction** to accommodate present and developing motor transport needs; what the approximate specifications and sum needed would be, for reasonable highway construction or maintenance in a given period; and what proportion of the sum needed should be obtained from motor vehicle taxation. As stated, these points are possible to make very clear, to the public and to legislators.

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Another point which could and should be made clear is that a much fairer method of distributing what would be the determined fair total taxation on motor vehicles, than present methods, would be to tax motor trucks and stages of given weights (stage weights could be calculated on closely estimated average passenger cargoes), so much per ton carried per mile; and privately owned passenger cars, for several good reasons not necessary to elaborate here, so much per gallon of gasoline bought. Thus those who use the roads most would pay most and, if calculations were accurate, in the proper ratio to the road maintenance expense incurred by each user.

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Incidentally, this formula could well be applied in cities. It would make the users, not sometimes poor adjoining-property owners, pay for the maintenance of streets according to their use of them. Presumably they would pass the cost on to the ultimate consumers, but of these there would be so many the burden would not be felt. As to ascertaining ton mileage on highways or streets, Maryland is said to have found, after highway experience, that depending upon periodical reports by drivers is safe because the reports are 90 per cent honest.

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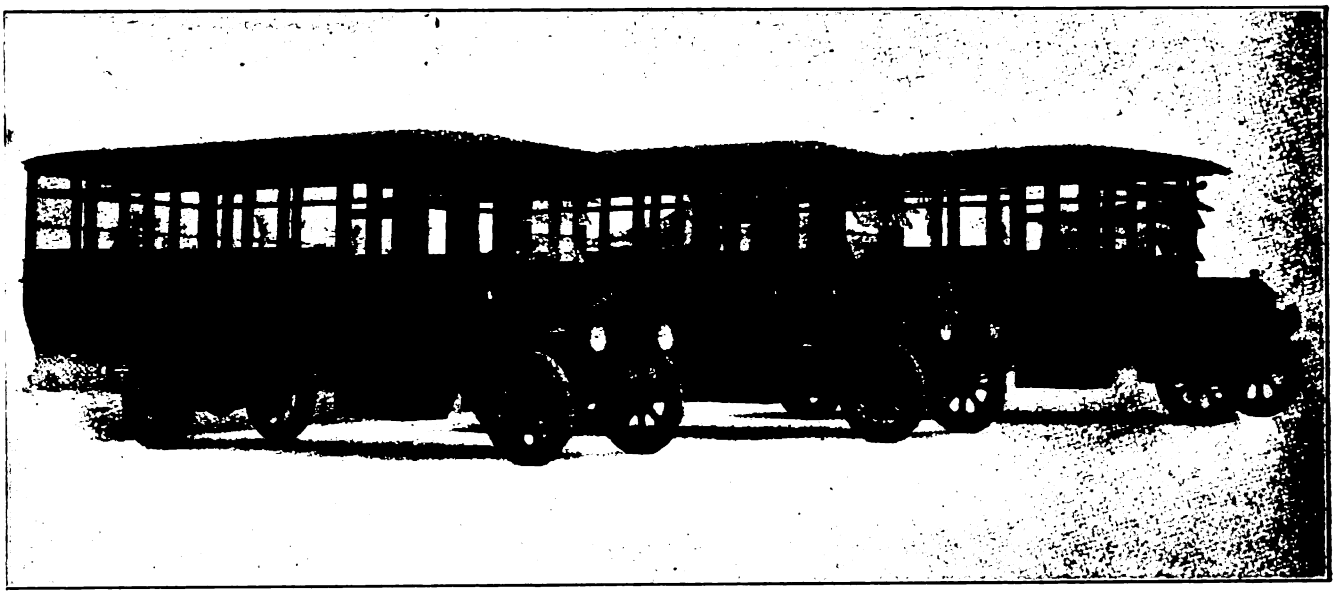
The purpose of the foregoing is to impress upon motor vehicle owners in California, truck and stage owners particularly, the situation, which is, that the railways, the state's highway commission and the county supervisors, have access, through free advertising in newspapers, to several million persons whose minds are being moulded in favor of increased taxes on all motor vehicles, and on motor trucks and stages especially, and in favor of motor truck weight limits which probably would be below the point of fairness and economy to all concerned; and that even expensive ability, engaged to prepare and place before the people facts that will enable them and the legislature to handle the situation intelligently and fairly, would be profitable.

Will Require Motor Truck Aid

On the basis of freight movement thus far in 1922, says National Bank of Commerce, New York, an unprecedented strain on the capacity of the railroads seems certain in the autumn as a result of the expected expansion of business, the delayed movement of coal and the marketing of large crops. The roads have ordered more than 100,000 cars during the year, and have steadily improved their facilities in other ways, but it nevertheless is difficult to see how serious traffic congestion can be avoided.



GARFORD

are selling a great many of their two-ton trucks equipped with the new type of Smith Cushion Wheel. Many different bus lines now have their Garford busses equipped with them. All trucks need the new type of Smith Cushion Wheel just as much as the automobile needs the pneumatic.

Garford has used for years the rigid type of Smith Wheel as standard equipment on their 3½, 5 and 7½ ton trucks.

The Garford Motor Truck Company recognize the quality and value of Smith Cushion Wheels.

Pacific Coast Representatives: A. H. Coates Co., 770 Mission St., San Francisco, California

SMITH WHEEL
SYRACUSE, N.Y. U.S.A.

Standard Char-a-banc Type

Model 75, Seating Ten, Meets a Demand for Rapid, Low Priced Service in or Between Cities

ON this page is a picture of model 75 bus made by Standard Motor Truck Co., Detroit. It has a body to seat 10 passengers in addition to the driver. The body and general design is similar to the char-a-bancs or motor coaches used so extensively in England.

This bus will fill the demand for a low priced, rapid intercity or sightseeing bus. In the rural sections, it will be ideal for hauling school children. In manufacturing districts it can supplement the various other forms of transportation. Another field will be hotel-to-depot transportation at summer resorts.

The Standard bus body will contain a number of improvements over the type so far built for this work. It will have a more rigid top construction, side curtains with glass lights, three full size doors on each side, provision for storing side curtains when not in use, more leg room, and a better seating arrangement.

With top, fenders, hood and trimmings finished in black and the body and wheels in maroon, it presents a very attractive appearance. It is trimmed in genuine leather and has ample room for each passenger. The cushions are designed for maximum comfort.

The Standard model 75 chassis will be used. The worm drive assures a quiet and smooth running chassis, and at the same time the construction of model 75 guarantees the purchaser the best quality-built bus that money can buy. It will be brought out to be sold at approximately $2500 list, f. o. b. Detroit.

Bethlehem Devises New Dealer Contract

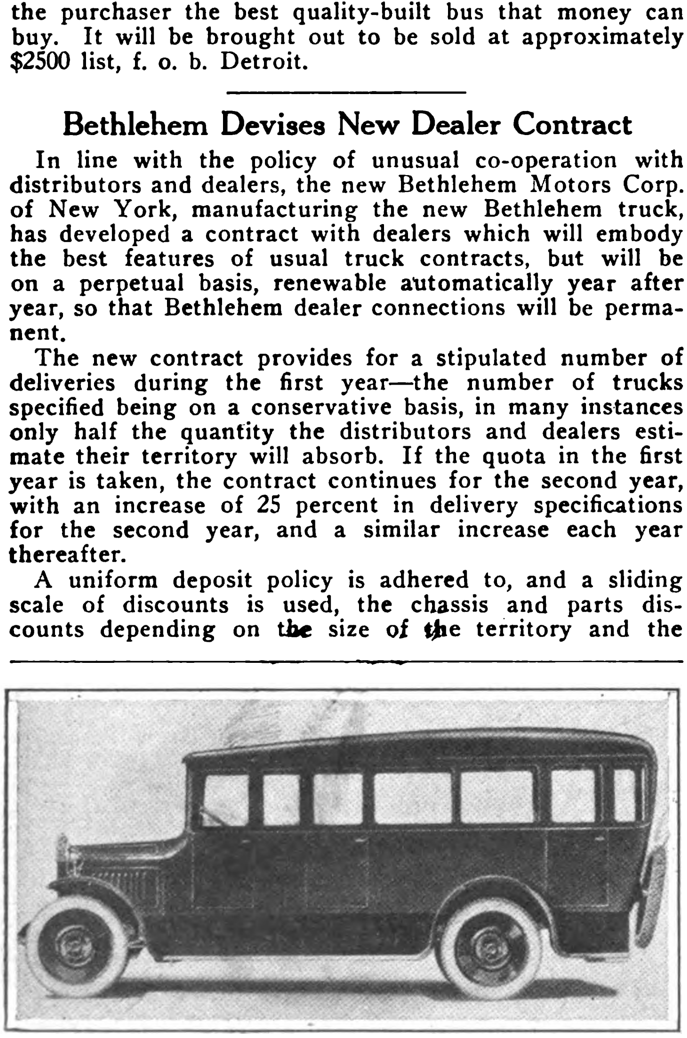
In line with the policy of unusual co-operation with distributors and dealers, the new Bethlehem Motors Corp. of New York, manufacturing the new Bethlehem truck, has developed a contract with dealers which will embody the best features of usual truck contracts, but will be on a perpetual basis, renewable automatically year after year, so that Bethlehem dealer connections will be permanent.

The new contract provides for a stipulated number of deliveries during the first year—the number of trucks specified being on a conservative basis, in many instances only half the quantity the distributors and dealers estimate their territory will absorb. If the quota in the first year is taken, the contract continues for the second year, with an increase of 25 percent in delivery specifications for the second year, and a similar increase each year thereafter.

A uniform deposit policy is adhered to, and a sliding scale of discounts is used, the chassis and parts discounts depending on the size of the territory and the number of deliveries to be taken during the first year.

Under the new form of dealer relationship, there will be no renewing of contracts at stated intervals, but instead, changes that may be advisable from time to time will be made in the form of appendices to the contract proper.

There are other features in the contract which are new and evidence the earnest policy of the new Bethlehem Corp. to give distributors and dealers the benefit of the fullest factory cooperation.



MODEL 75 BUS MADE BY STANDARD MOTOR TRUCK CO.

Industrial Motors Policies Discussed

As has been told, Industrial Motors Corp. was formed as a holding company, and now is composed of Selden Motor Truck Corp., Rochester, N. Y., and Atlas Truck Corp., York, Pa. The plan is to merge many manufacturing concerns.

A complete line of trucks exists already, the Selden having worldwide renown as a heavy duty machine, and the Atlas being well known in the speed truck field.

Allan Cosgrove, vice president of Atlas and of Industrial Motors, remains in charge of production at York. Selden takes charge of sales for both lines, with H. T. Boulden, second vice president of Selden, selected as director of sales. Under his guidance are the nine branches now operating, in New York, New Haven, Philadelphia, York, Charlotte, N. C., Atlanta, Cleveland, Chicago, Tulsa. The Atlanta branch is named Selden Service Co. All the others use the name Selden Sales & Service Co. In Chicago the branch takes over the excellent building and facilities of Hartnett-Stewart Motor Co., former representative, and Mr. Stewart manages the branch. In Philadelphia the Atlas and Selden branches are merged, with George H. Covert handling Selden sales, as before, and H. A. Woodruff continuing to sell the Atlas. The York branch also is new, the manager being H. M. Hesges, who had made a success in Atlas sales there.

To discuss policies and the outlook, from every angle, for the selling organization as it is, and having in mind other branches in practically all the large cities, a 3 day conference of Selden-Atlas men was held in Rochester recently. Twice a year, heretofore, Selden men have met thus, and the recent meeting was fruitful and the policy will be continued.

Sales policies will be governed by a committee composed of Frederick M. Small, of Martin-Parry Corp.; Allan Cosgrove, of Atlas; and George C. Gordon and H. T. Boulden, of Selden; and Mr. Boulden's friendly, philosophical personality, often expressed in type in Truck Transportation, the Selden organ, may be expected to permeate the selling force with the service idea, which is becoming recognized as the strongest factor linkable with quality of product.

Capital for Republic Motor Truck Co.

At Alma, Mich., August 12, a statement was issued by Col. Frank E. Smith, president and general manager of Republic Motor Truck Co., Inc., that on that day an agreement was reached between the noteholders' committee, bankers, and other creditors of Republic Co., with bankers, under which ample working capital will be provided. Details of plans for readjustment of capitalization and indebtedness are to be announced soon.

Outlook Dependable, Says Indiana Man

V. E. Bromley, assistant sales manager of Indiana Truck Corp., Marion, Ind., writes indicating that the outlook fits the phrase, "The Indiana is a dependable truck." He reports large fleet orders from different sections—one for a dozen 2 ton trucks for a contractor. Production has been increased. August looked like a fine month and September hopes are high.

If you pity the devil, the devil will take no pity on you.

JAHNS QUALITY PISTONS

Uniform Profits to Dealers

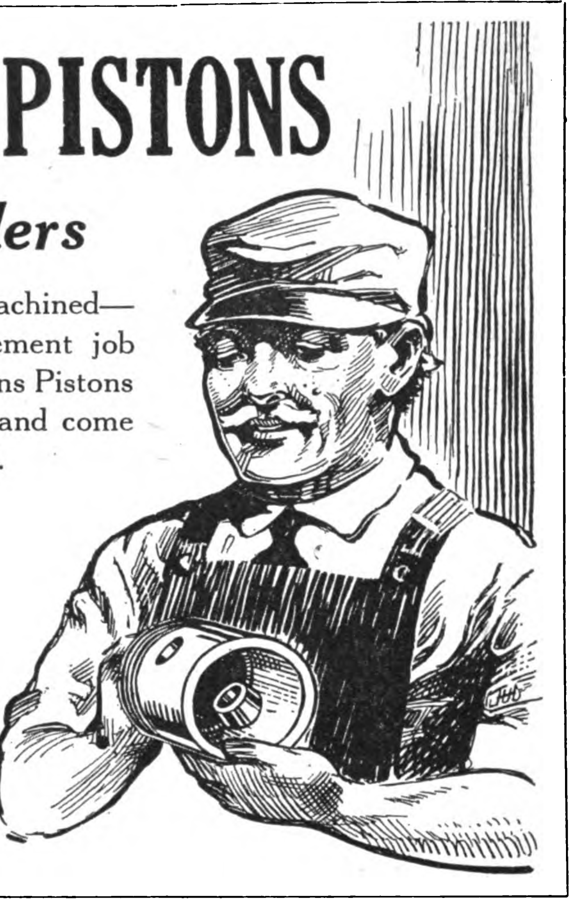
Because Jahns Quality Pistons are so accurately machined—semi-finished to the highest degree—*every* replacement job yields the dealer a worth-while margin of profit. Jahns Pistons are easily and quickly fitted. There are no delays and come backs to eat up profits when Jahns Pistons are used.

Made from the finest grey iron by master machinists who know the importance of accuracy. Produced in hundreds of sizes for every type and make of motor. Just one quality product backed by a service unexcelled in the automotive industry.

W. H. JAHNS

"Nothing But Pistons"

2652-2664 Lacy Street, Los Angeles, Calif.



JOHN H. DIELMANN CO., Inc.

THE LARGEST AUTOMOBILE PARTS DISTRIBUTORS IN SOUTHERN CALIFORNIA

JAHNS QUALITY PISTONS
AUTOMATIC PISTON PINS
R. S. P. AND CHROME NICKEL VALVES
QUALITY SNAP RINGS
DOUBLE DIAMOND GEARS
HEAT TREATED AXLES
PERFECTION SILENT TIMING GEARS
BEARINGS—BUSHINGS
STARTER GEARS—OIL RINGS

Phone 21831
" 271226

1423 SOUTH HOPE ST., LOS ANGELES

Phone 21831
" 271226

Favor Motor Cars on Rails

Thirty-Five Roads Stated to Be Using Gasoline-Driven Equipment to Supplant Steam Power

NEARLY $14,000 annually will be saved by the Union Transportation Co. of New Jersey through the substitution of motor rail car equipment for its steam locomotive and coaches. This new equipment will be used on the company's run from Hightower, N. J., where it connects with the Amboy division of Pennsylvania Railroad, to Pemberton, the southern terminus, where connection is made with the main line of the Pennsylvania.

It is also reported that the use of such equipment by the Narragansett Pier Railroad of Rhode Island has increased the patronage of the company's lines from a monthly average of 10,000 passengers to 26,000. This is a new high-water mark for the company.

Other railroads that recently have made similar installations of motor equipment are the New York, New Haven & Hartford, Great Northern, Cleveland, Cincinnati, Chicago & St. Louis, Baltimore & Ohio, Central West Virginia & Southern, Gilmore & Pittsburgh, Pittsburgh & Susquehanna and New Mexico Central. In all there are about 35 railroads using the equipment. The equipment may be used for other purposes besides the transportation of passengers. With a suitably designed body it may be used for carrying freight, baggage or mail. On a level track a speed of 25 to 28 miles per hour can be attained.

This new equipment is not expected to fill the field of the steam passenger train loaded to capacity, carrying 60 or 70 passengers and baggage. Its field rather is in localities where the traffic is thin and spread over the day, without pronounced peaks and where scheduled service must be provided irrespective of the volume.

Salt Brine, Truck's Foe, Beaten

Even salt brine fails to retard the continual service given the Myer Sanitary Milk Co., of Kansas City, Kas., one of the largest dairy and ice cream dealers in the Missouri Valley, by a fleet of seven GMC trucks. Four years ago one of the severest troubles the company had was in the continual breaking down of trucks due to salt brine, used to pack ice cream loads, leaking through the bodies, rusting and corroding the steel and iron surfaces. President Myer consulted experts of General Motors Truck Co., Pontiac, Mich., and they advised him in regard to the proper selection of a body for the trucks and he put his first GMC in operation. Mr. Myer has been more than pleased with the service given by the trucks, and the general practice of fair dealing followed by General Motors Truck Co.

Tractor Department

Would Increase Tractor Sales

THERE are notable examples of men whose private business prospers because they devote most of their time to work for the general good. That would not be true generally, but if tractor men would study co-operative agricultural marketing, and work hard to spread the idea, many more tractors would be sold.

Experience with raisins, oranges and other products shows that without co-operative marketing, price fluctuations hurt all concerned much more than steady prices which keep producers prosperous, enlarging their operations and buying power. Without co-operative marketing, controlled by producers, all are prey to the middleman who is a robber—and that kind is numerous.

The middleman thrives whether there is excess or underproduction. Too often he reports and collects an alleged deficit from the producer, while profiting on final sales to retailers. Some retailers swindle consumers anyway, but one reason is they are forced to submit to swindle by the so-called commission man.

In fruit, for example. At the great Terminal wholesale market in Los Angeles, soon after midnight, sorters hide a mass of small, inferior, often rotten fruit with top layers of larger fruit. The retailer has to buy this camouflaged stuff "as is," and feels forced to pass on to the public what, in reassorting, he does not have to throw away.

Some commission men swindle the producer in another way also. The writer's father-in-law bought a Michigan peach farm. He sent to Chicago baskets of carefully selected fruit, fine from top to bottom. The commission man made fake low-price sales—really to himself—at his front door, collected the "deficit" from the producer, had the "sold" fruit brought through his back door and resold it at the front at a profit.

An article by A. L. Spellmeyer, in the Los Angeles Times farm and tractor section, most of which is reprinted here, is well worth reading by tractor men in connection with the foregoing.

Distant fields, says Mr. Spellmeyer, are always greener, and the best hunting lies over the hill. Foreign trade is offered as a national panacea, when 35,000,000 farming people need things at home. There is not a farm or ranch in this United States of America that doesn't need repairs, machinery, paint or some city-made commodity. There is not a human among the 12,000,000 adults and their 23,000,000 of dependents engaged in agricultural pursuits who does not need clothing, household goods or some city-made article. The best market for United States goods is the home market, which will arrive after farm production has had a few profitable crops. The best thing to hasten good times would be a curtailment of the middle market profits in favor of the producer.

The country folks have been saving, using their old cars, wearing out their old clothes, deferring improvements, and repairing wornout implements. They are exactly in the position of the retail merchant who does not stock up, but buys from week to week what he must have to do any business. The farmer ditches his irrigation water instead of piping it, though he would save enough in a few years to pay for the pipe. **He uses the old mule team, when he is confident he could cultivate more cheaply and to better advantage with a tractor.** He economizes on fertilizer, though he knows it would pay to use it. He puts off until next year getting the registered sire he should have for his stock. He hasn't the cash, and until he gets that cash must economize, even though the process is in the long run more costly. The consequence is that a third of the national goods markets are dead. Everything the farmer has is showing wear. Give him a living profit from a few crops, and he would draw on the future to buy what he needs. Then those markets would revive.

The bulk of the present loss in agriculture comes essentially from the low prices allowed producers by the middle marketers, though consumers pay enough to make all agrarian industry profitable, if the eventual returns were justly distributed. The country seems afflicted with the retail mania, and the result is a number of food stores and a lack of volume that means a great waste and a high cost. Every second new building is another store, gas station or branch bank.

That the national prosperity of any country is dependent upon its agricultural prosperity is so well known as a basis of economics it seems foolish to repeat it, yet it would probably be news to about four-fifths of the people. The strenuous effort made by the vast majority to escape the slightest exercise of the human brain is responsible for many conditions that exist today.

The plain facts of our economic turmoil are that middle markets have developed efficiency and have progressed in methods, whereas producers have been in the dark ages and backward, with production being milked for the middle markets, and not being allowed a living profit. About everything, in fact, has organized but the farming business, and all the organized businesses, from finance to vegetables, have absorbed the profit margins from the unorganized businesses. That is fully proven by the success of organized food production.

Give these producers all around a profit, and they will need many things badly enough to be ready to buy them. Los Angeles would be flooded with business from the San Fernando district, from the Southland at large, from Arizona, Utah and Nevada, if the farming business showed the profit it deserves to show. All America would prosper in like measure if all American farmers were getting what was coming to them.

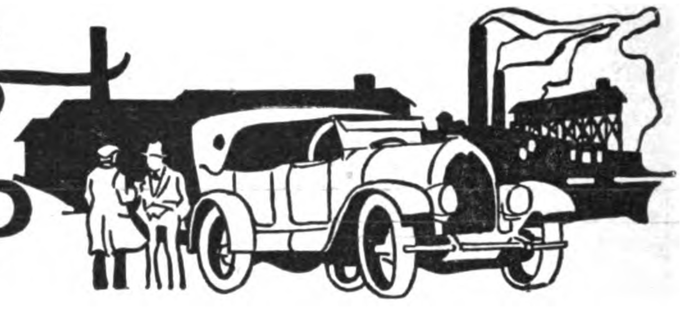
The automobile men would get orders for new cars, repairing or painting. Tractors would sell briskly, as would also paint and pipe and fence and farm implements and new hats and radio sets. If profits really warranted, new groves would be laid out and more acreage leveled for alfalfa. It would be the same in chickens and live stock and every other branch of agriculture. As things are, there is no incentive to go into farming.

Let finance and government interest themselves in every way feasible in the protection of agrarian production, and with a few profitable crops we will have busy factories working overtime to supply what 35,000,000 farming people need right now and can't buy. If that wouldn't bring prosperity, I don't know what would, says Mr. Spellmeyer.

C. L. Best Tractor Prospers

Sales of Best tractors, made by C. L. Best Tractor Co., San Leandro, Calif., the first 7 months of 1922, exceeded those of all of 1921 by 75 per cent. July, usually dull, beat July of three previous years 180 per cent. Earnings this year are more than double dividend needs on $1,250,000 7 per cent preferred stock. Sales are made throughout the West; Hawaii, Dutch East Indies, Japan and Russia.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner)

Greatly improved business conditions all through the country are reported from many quarters. A traveler for a large axle manufacturing company, who returned recently from an extensive Western and Canadian trip, found conditions in the Pacific region very good. He said that at Los Angeles, where it was predicted there would be a big slump after the long run of prosperity, there was the greatest activity in the building line, and the retail selling of motor trucks had increased amazingly. In San Francisco activity in the truck field was slightly less than in Los Angeles. Business generally was increasing in San Francisco. In Portland there was improvement which started about two months ago. Seattle showed great improvement over a year ago. Vancouver and Winnipeg were showing improvement. Other reports from quarters not to be denied speak of improvements throughout the South, of improvements in New England; in fact these reports seem to cover every part of the country.

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The recent report of bumper crops throughout the nation, as the result of favorable July weather, was welcome news as it means farmers will buy this fall. The Government report shows,. for instance, a corn crop of more than 3,000,000 bushels; sweet potatoes never so abundant; white potato crop exceeded but once in history; apples double the 1921 total; hay crop the largest ever known; tobacco the fourth largest crop ever known; and spring wheat away ahead of record. All of that means sure business.

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General business is booming in Detroit these days as a result of the prosperity of the motor car business. Hard times have gone and there are more jobs than persons to fill them. The population of Detroit is again on the increase. About 75 families arrive daily to reside, rents are going up again, and building is reaching record breaking proportions.

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Reduction of prices by many of the leaders of the industry, forcing reductions by some of the lesser lights, the coal strike and resultant shortage of fuel; the railroad strike and resultant hindrances in transportation; and the regular seasonal slump, forced the makers to cut production somewhat for the third quarter. Indications at this writing are not strong for recovery in full for some time for, even with the rail and coal strike out of the day, time inevitably must be lost in repairing the damage.

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The seasonal slump was looked for, but was not as serious as expected by the pessimists who predicted a considerable falling off during the summer. From an output of 281,000 cars and trucks in June the drop was only to 245,000 in July and the drop might have been less with the transportation and coal situation out of the way. Delays in shipments, of 10 days to two weeks, have been reported by the makers who were forced to once more order material by express.

General business naturally has been effected by uncertainty as to the tariff, labor difficulties and other influences. Once these matters are righted, automotive makers will be unable to supply the demand.

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Some have called the price reductions crazy in view of the relations of accessory and parts makers to the motor car manufacturers. The latter looked with the utmost dismay upon the price war, as some called it. Several of the large makers rushed into print to say that it was not a price war but that the reductions resulted from large production and economies. However, there are those in the trade who say the reductions came through the effort of the larger makers to drive from the field as many of the smaller ones as possible. Large producers who manufacture their own parts now are in position to wage real warfare upon the so-called assemblers. The effect? Some say it will be to crush many, eventually. It will affect not only the car and truck makers, but the accessory and part markers, for the latter must arrange their prices, regardless of cost, to enable the car manufacturer to make money. Many an old-time firm supplying the car makers has gone on strike already and turned down old customers because continuing to take orders entailed losses so severe as to mean ruin.

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The deflation movement between midsummer of 1920 and 1921 was brought about by the buyers' strike but the present one is the result of an opposite condition—large production and ability to buy in large quantities—according to one manufacturer. Another, and this one an official of General Motors, says the new prices are the result of the anxiety of the makers to deal liberally with the public and thus take but a satisfactory margin of profits on the capital invested. However that may be, it would seem the real issue is a battle in which the smaller makers must suffer.

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Also—car makers have been making money, parts makers have suffered and will suffer more, and many predict that the car makers should have reinstated the parts and accessory men on the basis of living prices for their material and not forced them to take still larger losses.

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One interesting phase of the situation is the placing of dealers and distributors once more in jeopardy. Trades have been made with no thoughts of a reduction at this time, and again the dealers are left to hold the bag, with many used cars on hand, which must be sold at a loss. Dealers had only just started to again get on their feet when the blow fell.

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The steel situation is worrying the automobile makers as much as anything else. The strikes in the coal and railroad fields may impair production seriously in the steel field. This is said to be the most disturbing factor.

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The motor car today is driven by entire families, for he or she who is not a driver is the exception, so marked as to be notable. Cars wear out more quickly today because driven by so many different people, and wear out in a fewer years because driven the year round; because allowed to stand in the open all year round; and because being made so good, they are almost fool proof, and do not receive the attention that they should.

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However that may be, the fact remains that for the first six months of 1922, in the passenger car field only, production was 1,016,742 as compared to 1,514,000 for all of 1921. Production in the best year, 1920, was 1,883,158 passenger cars and 322,039 trucks. In 1919 passenger cars produced numbered 1,657,652 and trucks 316,364. It is not at all impossible that 1922 will break the 1920 figures.

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Present conditions may prevent the reaching of the 2,000,000 mark in motor car production, for coal supplies have gone down and down.

Christopher Is Delco Superintendent.

C. F. Kettering, president of the Dayton Engineering Laboratories, has announced promotion of George T. Christopher to be general superintendent of the plant. Mr. Christopher formerly was assistant superintendent and production manager. He is a graduate of Rose Polytechnic Institute and has distinguished himself as an engineer. He did important work in the ordnance department during the war. His special work with Delco has been operation of the manufacturing division.

* * *

Hupp Adding Floor Space.

Hupp Motor Car Co. is now adding new construction to its plant on East Milwaukee Ave., Detroit, which will increase the factory space by more than 500,000 square feet. Upon completion of the new building project the plant's total area will be 1,570,000 square feet. In addition to the main plant in Detroit there are five subsidiary properties, four owned by the company and the fifth controlled by it.

* * *

Re Flint Motor Co.

Incorporators of Flint Motor Co., latest of the enterprises of William C. Durant, were Mr. Durant, C. F. Daly, Carroll Downes and H. F. Hebermann, all of New York City. Each has 20 shares of preferred stock and 10 shares of the common. The purpose is to erect a plant in Flint to build the new Flint Six, which will be marketed at under $1200.

* * *

Boynton to Issue GMC Publicity.

Walter C. Boynton has become a member of the advertising and sales section, advisory staff, General Motors Co., and will be responsible for the general publicity department. This department will act as a clearing house for the publicity of General Motors, its divisions and subsidiary companies. Mr. Boynton has had a wealth of experience as a writer and editor, also as a business executive.

* * *

Rice, of American Bosch, Dead.

H. E. Rice, assistant to the president of the American Bosch Magneto Corp., was killed recently in a grade crossing accident near Philadelphia. Mr. Rice was 39 years old, and known in the industry. He was in electrical engineering work until 1910, when he joined the Atwater-Kent Mfg. Co. In the fall of last year he joined the American Bosch organization.

* * *

How Franklin Advances Men.

Franklin Automobile Co., Syracuse, N. Y., is installing a plan whereby workmen can see by a chart how near 100 per cent proficient they are in various operations. Vacancies mean advancement for the best men. Of two, equally productive, the older employe moves up. The lowest vacancies, ordinarily, will be filled with new men.

* * *

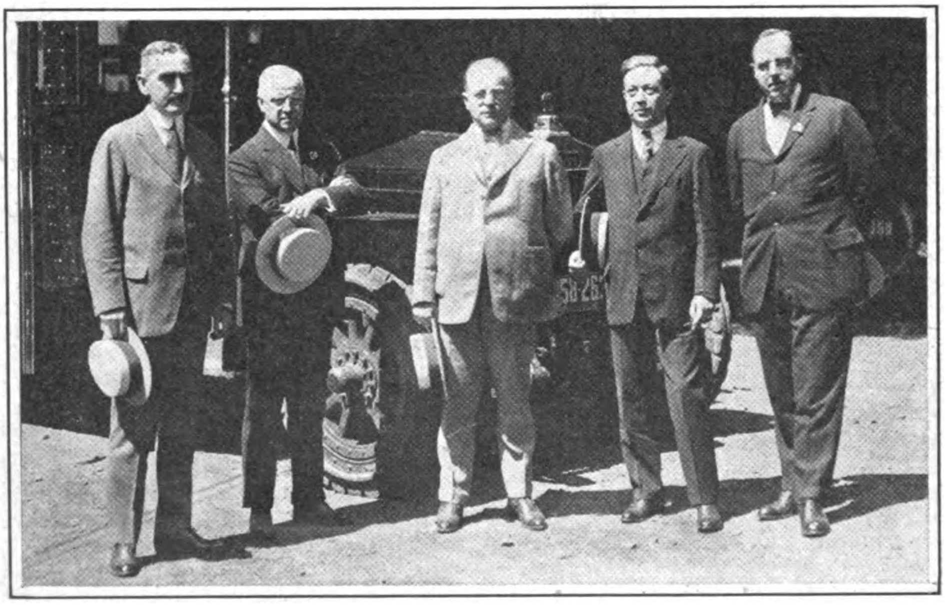
David Buick to Make Own Car.

David Dunbar Buick, who lent his name to the now famous Buick Motor Co., of Flint, is organizing a company to produce the Dunbar car. It is understood negotiations are pending for purchase of a plant. Production of 5 models is expected to be begun early next year.

* * *

New Star to Shine Soon.

With production of the first Star car from the Durant plant at Lansing scheduled for September, placing of machinery to provide for it has begun. Bodies will be turned out by Auto Body Company, Lansing, and the motors will come from the Continental factory at Muskegon.



SELDEN-ATLAS OFFICERS AT RECENT INDUSTRIAL MOTORS CORP. CONFERENCE.
In the Car of Commerce section of this issue is news of the recent conference, in Rochester, N. Y., of Industrial Motors Corp., the considerable nucleus of which is composed of Selden Truck Corp., Rochester, and Atlas Truck Corp., York, Pa. The picture shows (left to right) William C. Barry, Jr., first vice president of Selden; R. H. Salmons, vice president of Selden and of Industrial Motors; H. T. Boulden, second vice president of Selden and director of sales of Industrial Motors; Allan Cosgrove, vice president of Atlas and of Industrial Motors; George C. Gordon, president of Selden and vice president of Industrial Motors. Of the latter, John J. Watson, Jr., is president and board chairman. He also is president of Lee Tire & Rubber Corp.

* * *

Maxwell Exports Increased.

Improved conditions in foreign markets are evidenced in the statement of Maxwell, that its product now is selling in 28 foreign countries. Exports since the first of the year have increased each month according to H. M. Salisbury, export manager.

* * *

Roberts, Duesenberg Sales Head.

J. E. Roberts has been appointed general sales manager of Duesenberg Automobile & Motors Co., Indianapolis. He was formerly sales manager of Cole, and more recently in charge of Western territory sales for Rolls-Royce.

* * *

To Dispense Air-Cooled Ads.

Charles F. Remington, vice president of the Fred M. Randall Co., advertising agency, has been appointed director of advertising and publicity of Detroit Air Cooled Car Co., of which W. J. Doughty is president.

* * *

Smith Is Mitchell Ad. Director.

T. Harris Smith has joined Mitchell Motors Co., Inc., of Racine, Wis., as advertising and sales promotion manager. Mr. Smith formerly was general manager of the Kansas City branch of Packard.

* * *

To Make Bock Bearings Abroad.

William H. Lolley, special representative of Standard Parts Co., is in Europe seeking to negotiate with German and French interests for the manufacture of Bock taper roller bearings on the Continent.

* * *

S. A. Miles Home Again.

S. A. Miles, show manager of the National Automobile Chamber of Commerce, returned from Liverpool recently with Mrs. Miles, after their annual visit to Europe.

* * *

The Cadillac Victoria.

The newest Cadillac model, a victoria, has better accommodations for driver and passengers, and many refinements in body construction and decoration.

* * *

Firestone Officials Abroad.

Harvey S. Firestone, president of Firestone Tire & Rubber Co., and Thomas Clements, vice president, are in Europe for pleasure and business.

* * *

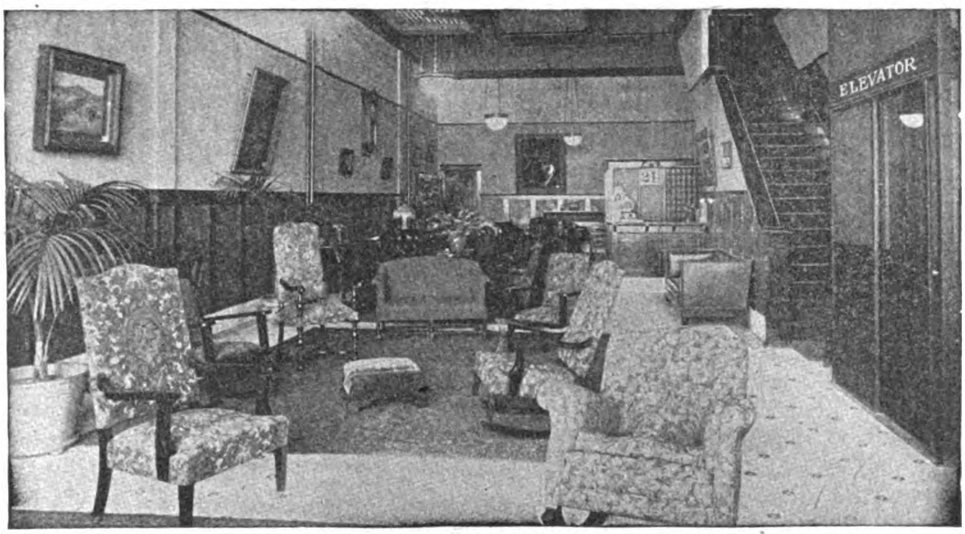
Chapin Goes to Europe.

Roy D. Chapin, president of Hudson Motor Car Co., sailed from New York, August 15, for a short trip to Europe. Mrs. Chapin accompanied him.

* * *

Astrophysical phenomena — when the car hits a hole and your head hits the top and you see stars.

You'll Feel at Home at the Botsford



When Motor West selected this comfortable, home like, and fire-proof hotel as San Diego headquarters for all who read and travel, the three chief demands of the well-read traveler were considered.

LOCATION - SERVICE
ATMOSPHERE

Manager Floyd B. Kirk takes especial pride in the central location of his house—just north of Broadway on 6th street—the courtesy extended to guests by all employes, the up-to-the-minute accommodations he has to offer, and the cozy lure of hominess that pervades his entire establishment.

Before you start, be sure of Special Rates and Reservations by wiring—

HOTEL BOTSFORD
SAN DIEGO, CAL.

Radoye Now Haynes Sales Head.

Gilbert U. Radoye has been appointed director of sales and advertising for The Haynes Automobile Co., Kokomo, Ind., by Alton G. Seiberling, vice president and general manager. For the past 3½ years Mr. Radoye has been director of advertising and sales promotion, and he will continue this work in addition to his new duties.

Mr. Radoye is well qualified to direct the Haynes merchandising activities, by his wide experience in this field. Before going to Haynes he held important positions in the sales and advertising departments of other leading American automobile institutions. He is a member of the advertising committee of the National Automobile Chamber of Commerce. His present promotion is a direct result of the signal success which he has achieved in directing national advertising campaigns.

* * *

McCord Segregation Plan.

Stockholders of McCord Mfg. Co., Detroit, are to be asked to vote on a plan for segregating the radiator, gasket and lubricator divisions of the company into a new organization to be called McCord Corp. The issued stock of this corporation, comprising 50,000 shares of class A and 150,000 shares of class B, under the plan, will all be owned by McCord Mfg. Co., which proposes to sell the 50,000 shares of class A stock and with the proceeds settle with its creditors, making possible retirement of the advisory committee which has had charge of affairs since August, 1921. The class B stock, possessing the sole voting power, is to be retained by the company, which will receive the earnings accruing to it. It is proposed to operate both companies, but as separate units in sound financial condition. The plan is said to have met the approval of McCord Mfg. Co.'s bank creditors as well as of the advisory committee.

AC

The Standard Spark Plug of the World

Every motorist is a prospect for the sale of AC Spark Plugs because most cars are factory-equipped with AC's and there are specially designed AC's for all other engines, too.

A C Spark Plug Company
FLINT, *Michigan*

* * *

Tire Making Records Broken.

An indication of how busy the factories are is shown by how busy the tire factories were in July, when more than 2,750,000 casings were made in the Akron district. This broke wartime record.

* * *

Feeling Fuel Shortage.

In the automobile manufacturing district as a whole, the fuel situation was beginning to be interesting in early August on account of the railway strike. Shipments had not then been seriously affected. Day passenger service between Cleveland and Detroit was being curtailed.

* * *

To Guide Apperson Sales.

E. M. Lubeck, of Chicago, has been appointed general sales manager of Apperson Brothers Automobile Co., Kokomo, Ind. Mr. Lubeck has a wide acquaintance in the industry. For 15 years he has served Studebaker, Maxwell, Hudson and Buick in a sales capacity. During the war he was in active charge of all motor transportation in the American sector at the front. T. E .Jarrard, vice president of the Apperson Co., has been promoted to the position of sales director.

* * *

(More factory items on page 65)

LOS ANGELES WAREHOUSE COMPANY
MAKES A SPECIALTY OF AUTOMOBILE STORAGE

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

316 COMMERCIAL STREET
14727, Main 4787

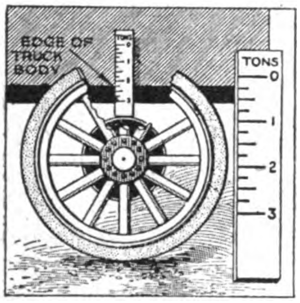
Motorists' Letter-Box

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

TO SPOT TRUCK OVERLOADS.

Editor Motor West: I find that my men are ruining too many tires for me by constant overloading of my big truck, and I wonder if you can tell me a good way to judge varying loads of different material, as I have no scale available and cannot afford to buy one.—L. B. C., San Diego, Calif.

One of the simplest methods is to use a graduated scale. This scale can be laid off by applying known weights and measuring from some part of the axle, or of the spring supports, to the edge of the body. This marking off should be done on the level and the scale marked off for the different deflections of the springs as the weight is increased. Then, when ready to weigh a load, take a reading from each side of the body and the average of the two will be the approximate weight of the load, even though the truck is not on level ground. You will find that overloading is doing much more harm to your truck than appears from wear and tear on tires.



SUBSTITUTE FOR SCALE.

REPAIRING CASING CUTS.

Editor Motor West: I live in a very rocky country and have trouble with small cuts in my casings. These cuts allow water and dirt to get in and soon ruin the fabric. I can't always have them vulcanized, and anyway the expense is too much. What can I do to overcome this trouble?—N. C. M., San Bernardino County.

If you will get a preparation known as tire dough you can repair the cuts very easily. It is a preparation of raw rubber and is very simple to apply. First clean the cut thoroughly with gasoline and then rub the edges of cut with a piece of medium sandpaper. When thoroughly cleaned apply a coat of the cement that comes with the tire dough outfit. While the cement is drying knead the dough with your fingers until it is soft and gummy. When cement is dry, work the dough into cut well and spread over outside to make a smooth job. This should be allowed to set for a few hours if practicable, but it is not absolutely necessary.

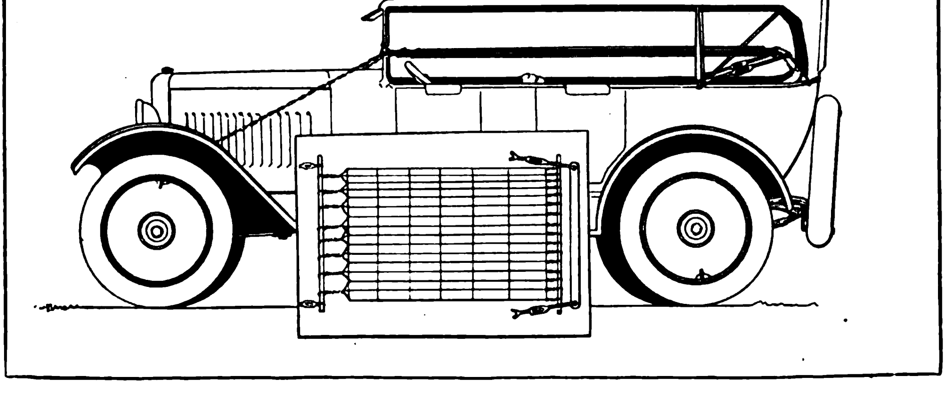
CAMP BED FOR CAR.

Editor Motor West: Can you tell me of a good way to install a bed in my car for camping? My car is new and I don't want to have the back cut out for sleeping as friends have advised me to do?—A. B. G., Phoenix, Ariz.

A mighty good bed spring, of the type which fits from corner to corner on the inside of any touring car, and which does not decrease the capacity of the car in any way, was put on the market recently. It is held in place at a level, even with the top of the rear seat back rests and the middle of the windshield in front. A metal cross beam, braced against the car top supports, holds the rear end of the spring in place, and the front end is drawn into position by a set of turnbuckles which are linked to a triangular lug swung from the windshield brackets. These lugs are held firmly by a set of tackle hooked on the front end of the car frame. The springs are built in all sizes and can be used on either a large or small machine. The drawing illustrates the bed in position, also the method of attaching it to the machine. It does not interfere with putting on side curtains.

BREAKING NEW MOTOR.

Editor Motor West: It is an old song, a plea for info about how to break in a new motor. One seldom hears it or the response any more. Sing the letter again, will you?—W. M. B., Reno, Nev.

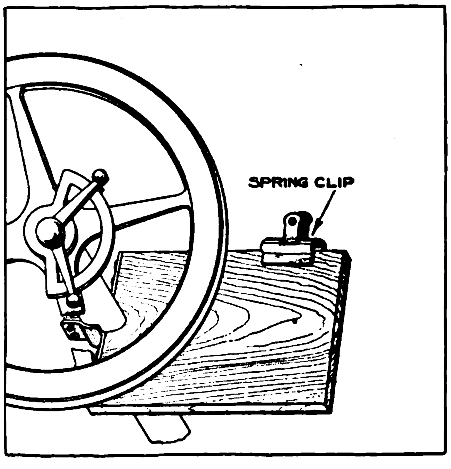


GOOD TOURING CAR SPRING BED, HIGH ABOVE SNAKES 'N' THINGS.

When a car is new and the motor and all other parts are stiff, it should be favored in every possible way. Make it a set rule not to drive more than 20 miles per hour, the first 1000 miles. After the car has been driven 500 miles drain the oil from the crankcase and flush out with flushing oil and replace with new cylinder oil. After the car has been driven 1000 miles more, drain the oil and flush out crankcase again. If these rules are followed the chances are 100 to 1 you will have no bearing trouble or scored cylinders. An engine which is properly broken in and limbered up will stand the hardest use without giving trouble, but one which is not given proper care when new and stiff is likely to cause some expensive repair bills.

A STEERING WHEEL DESK.

Editor Motor West: Here is a little device I made for holding my order pad while writing orders from my car. I am sending it along, as it may prove useful to some other readers, whether for holding orders, road maps, and the like. The attachment is made, as shown in the drawing, from a piece of board with the two-piece clamp fastened to one end with screws. A spring clamp will hold orders, maps, or other papers to the board very nicely.—G. A. L., Spokane, Wash.



A HANDY STEERING WHEEL DESK.

TO RAISE GEAR RATIO.

Editor Motor West: I have a 1916 Overland and it is geared to 4 to 1 in the differential. To gear it up higher, would I have to change the pinion gear and master gear, or can I just change to a larger pinion gear?—L. E. C., Bakersfield, Calif.

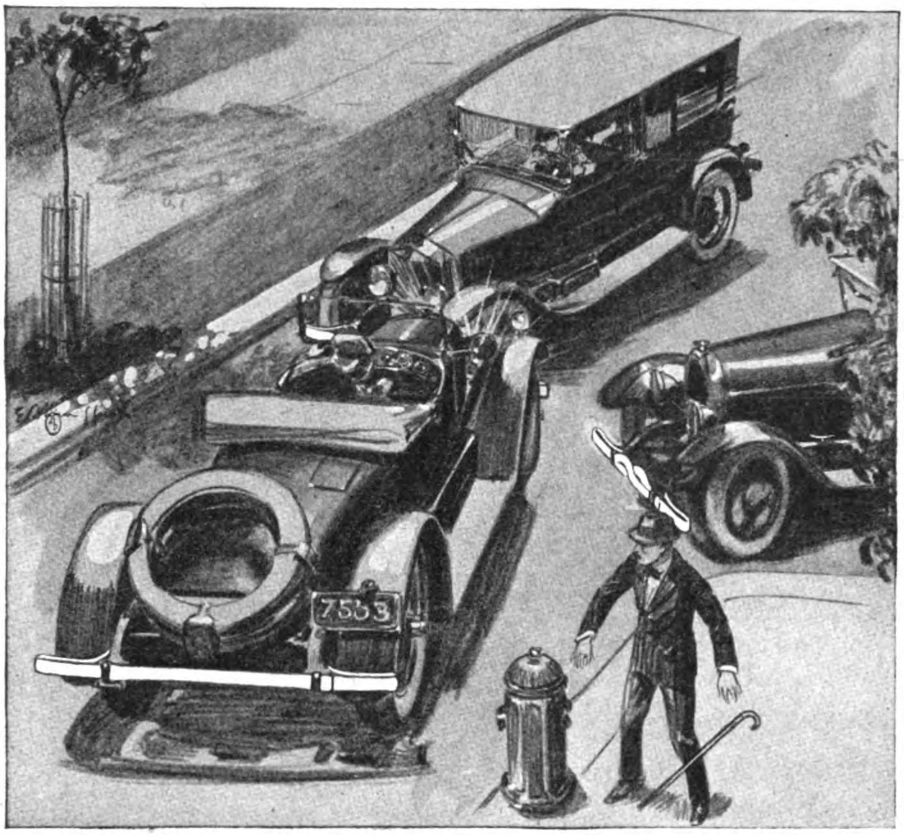
It would be necessary to change both gears in your case.

WATCH FOR LOOSE RIVETS.

Few owners examine the frame for loose rivets, yet these often shake loose and fall out. A car owner recently found that two rivets which held a cross member of the frame had slipped out and the side rail had cracked a little as a result.

TO CARRY ROLLED TUBE.

When rolling up a tube, strips of cotton flannel should be used. The rolled tube should be carried in a thick cloth bag. Talcum powder should be sprinkled in the bag before the tube is inserted.



Careless Driver Cuts Corner—CRASH!

CAR shoots out of side street! Driver on highway is too late to stop! A quick turn to the left—then, *crash* into the car coming in the opposite direction. But neither car is damaged. Both were Lyon-protected.

Lyon Spring Bumpers yield to every blow, like a spring. When struck, the Lyon-patented two-piece overlapping front bar and the open "looped-ends" absorb the shock completely instead of passing it on to the frame.

Lyon Spring Bumpers are guaranteed to take the full force of any blow at the rate of 15 miles an hour without injury to the car or its occupants. Then, too, insurance companies grant reduced rates on Lyon-protected cars. This saving will often more than pay the cost of bumpers for *your* car.

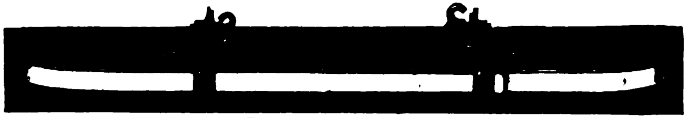
Lyon Spring Bumpers are beautifully finished, remarkably strong and perfectly balanced. They can be quickly attached without drilling or altering the frame by the use of the Lyon-patented hook-bolt.

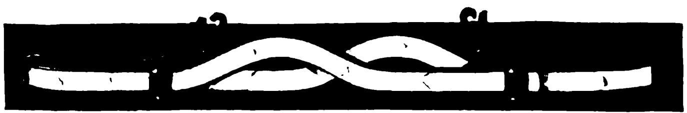
Over a million in use. $10 to $25.

The Lyon trade-mark is on every genuine Lyon Spring Bumper. Accept no substitute.

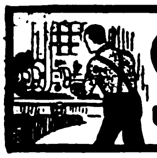
METAL STAMPING COMPANY Long Island City, New York

Canadian Licensee, B. J. Coghlin Co., Ltd., Montreal, Canada


Lyon Straight Bar Bumper


Lyon Convex Bumper

LYON RESILIENT BUMPERS



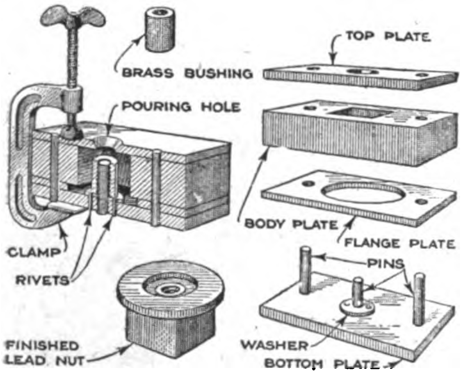
Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

MAKING TERMINAL NUTS.

A mold in which scrap lead can be used for casting storage battery terminal nuts to replace lost or battered ones, is a convenient accessory about the garage or electrical service station. It can be made of hardwood, or hard fiber, if only a few nuts are to be cast, but a more substantial mold is made of iron or steel plates. If brass is used the surface must be oxidized, to prevent the lead from sticking.

A top plate is made first; this is to have a countersunk pouring hole, about 3/16 inch in diameter. Then comes the thicker plate with a square hole, the size of the nut body; this is easily chiseled out of wood or fiber, but if metal is used a square or triangular file must be used to form the corners after the hole has been drilled to the diameter of the flats. The square hole must be tapered slightly toward the bottom, so the casting can be removed easily. Next comes the bottom plate, in the center of which is driven a pin the length of the brass bushing to be used and small enough to enter the bushing after it has been tapped. Then place an iron washer, rusted or coated with graphite to prevent the lead sticking to it, over the pin and rivet it to the bottom plate. The purpose of this washer is to form the shallow cavity in the bottom of the nut. This cavity is filled with grease or vaseline before the nut is screwed into place on the battery, to protect the brass stud and exposed ends of the bushing from corrosion.



TO MOLD BATTERY TERMINAL NUTS.

After all the parts are completed they are assembled, clamped together, and a hole is drilled into each end to take the dowel pins which are fitted into the bottom plate.

A bushing is made of round or square brass bar, drilled and tapped for the stud it is to fit. The outside is tinned with solder to make the lead stick to it, and to prevent its working loose and turning inside the lead casting. When ready to use, the bushing is placed over the central pin of the bottom plate and the mold is assembled, sheets of paper being placed between adjacent plates and care being taken to see that the paper does not extend into the mold cavity. One or two small clamps are used to hold the parts of the mold together and it is then ready for pouring the melted lead. If the mold is of metal it should be heated before the lead is poured. The casting is easily removed from the metal mold by removing the two dowel pins and driving off the top plate edgewise, thus shearing off the "gate," but if wood or fiber is used, the top plate should be made in two parts, the dividing line being through the countersunk pouring hole.

TO CLEAN FUEL LINES.

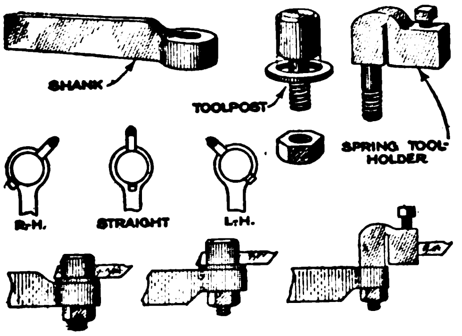
The frequent difficulty of clogged fuel lines from the gasoline tank to the carburetor has caused one service station man to devise a handy little instrument for blowing out the obstruction with air pressure. An ordinary tank cap has a hole drilled in its center and a tire valve is soldered in place. In use, the cap with the valve is screwed on in place of the regular cap, and about 4 pounds of air pressure is pumped into the tank with an ordinary tire pump, after the end of the fuel line has been disconnected from the carburetor or vacuum tank. The obstruction is blown out and the air pressure is maintained for a few seconds to blow the pipe clean. Only a few sizes of tank caps are required to handle practically every make of car.

WHEN COUPLINGS GO.

The fabric couplings between the generator and timing gear, or the circulating pump and generator, frequently wear out, putting the pump or generator out of commission. These couplings seldom are carried in stock by garages and service stations, but a satisfactory substitute can be made from sections of an old tire casing, by removing the tread and cutting the remaining layers of fabric to the exact shape of the worn-out coupling. Cut the outside diameter with a pair of shears, gouge out the center hole and bolt holes, and a coupling is obtained that will wear as well as a new part, at practically no cost.

A TOOL OF MANY USES.

The man in the small shop always can find a place for a good tool that has many uses. Too many such tools are poor makeshifts, but the one shown in the drawing has proved itself in a great many shops; has been found entirely practical and to stand up under hard use. The shank is forged out of ⅝x1¼ inch cold rolled steel, with a ½ inch hole drilled in the boss, the faces of which are filed parallel. The toolpost is of ⅞ inch machine steel with a ½ inch thread. The spring tool holder can be of cold rolled steel, or tool steel, hardened and tempered as desired. The drawing fully illustrates the different uses to which this tool, easily made, can be put to good advantage.



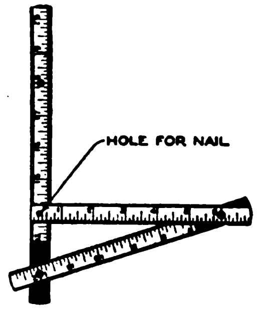
A VERY HANDY COMBINATION TOOL.

TO CLEAR FORD OIL PIPE.

It is possible to clear out a Ford oil pipe, which has been clogged, by taking off the front gear plate, which discloses the cam gear and this is removed with a puller. Now the end of the pipe is exposed, and to this an air hose is connected, the air turned on and the obstruction blown out. Without this little trick it is necessary to tear down the engine to get at an obstruction of this kind. Ford specialty repair shops should heed this plan.

A HOME-MADE SQUARE.

The man who likes to carry as few tools as possible around the shop can make a very useful and accurate square from a folding rule, as shown in the illustration. To convert an ordinary rule into a square, drill a small hole through it in such a manner that two sections of the rule will be at right angles to each other.



HOME-MADE SQUARE

A nail through this hole will serve to hold the rule in proper position. When it is desired to use the improvised square for a rule again, simply withdraw the nail.

TO TIGHTEN LOOSE NUTS.

Sometimes, after tapping out a nut for a shaft or bolt, it may be found to be a trifle too large, when an extra-tight fit is needed. If so, heat the nut and drop it into cold water. This usually will shrink the nut enough to make a tight fit. Repeat if necessary. Cheaper and easier than making an entirely new nut.

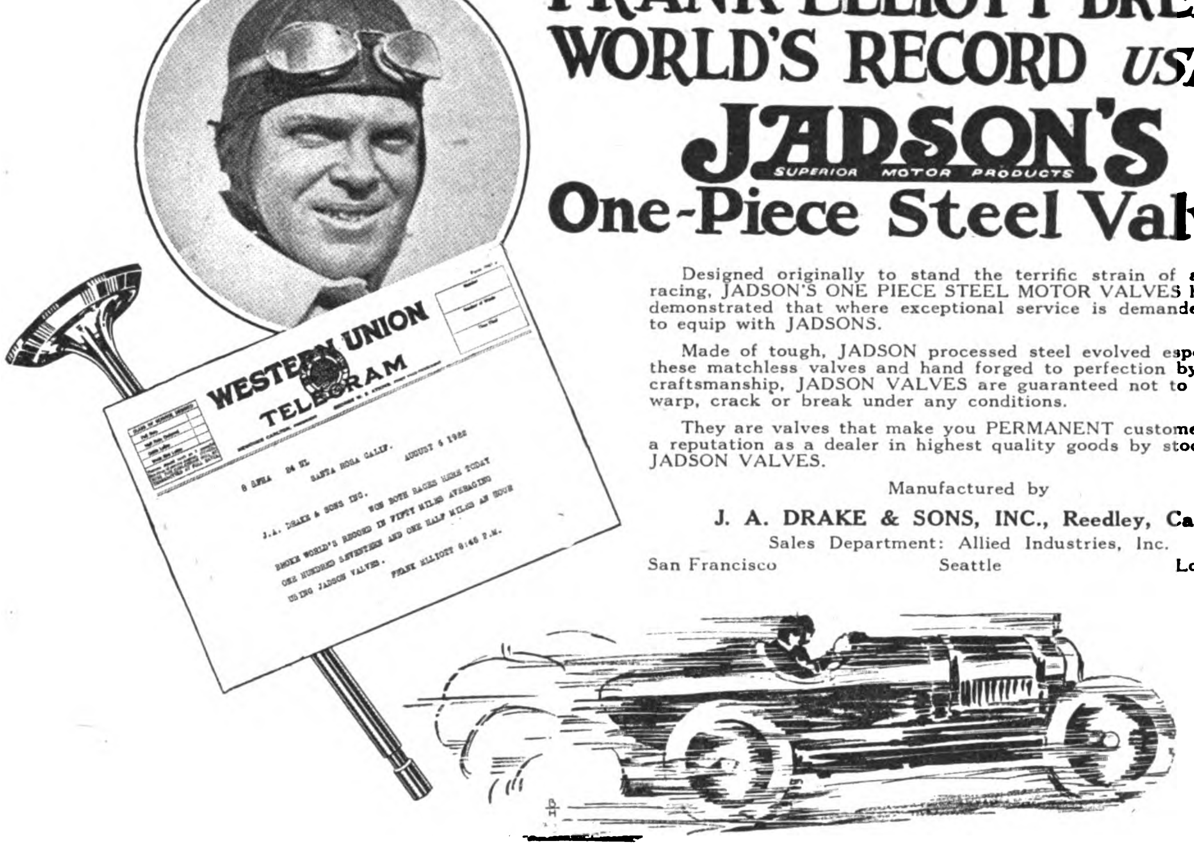
A TIP ON DRILLING.

An ordinary twist drill can be made to drill a hole larger than its diameter, by grinding one of the lips a trifle longer than the other. This method will take care of odd size drilling jobs.

TO "THIN" SHEET BRASS.

A quick method for reducing sheet brass in thickness is to dip the sheet repeatedly, a few seconds at a time, into nitric acid. This can be kept up until the proper thickness is obtained.

Oilstones and razor hones that have filled up with steel particles may be cleaned by washing first in hydrochloric acid and then in clear water.


WESTERN UNION TELEGRAM
B H

8 SFNA 24 NL
SANTA ROSA CALIF. AUGUST 6 1922
J.A. DRAKE & SONS INC.
WON BOTH RACES HERE TODAY
BROKE WORLD'S RECORD IN FIFTY MILES AVERAGING
ONE HUNDRED SEVENTEEN AND ONE HALF MILES AN HOUR
USING JADSON VALVES.
FRANK ELLIOTT 8:45 P.M.

FRANK ELLIOTT BREAKS WORLD'S RECORD *USING* JADSON'S

SUPERIOR MOTOR PRODUCTS

One-Piece Steel Valves

Designed originally to stand the terrific strain of **automobile** racing, JADSON'S ONE PIECE STEEL MOTOR VALVES **have again** demonstrated that where exceptional service is deman**ded it pays** to equip with JADSONS.

Made of tough, JADSON processed steel evolved e**specially for** these matchless valves and hand forged to perfection **by JADSON** craftsmanship, JADSON VALVES are guaranteed not **to pit, scale,** warp, crack or break under any conditions.

They are valves that make you PERMANENT custo**mers. Build** a reputation as a dealer in highest quality goods by s**tocking with** JADSON VALVES.

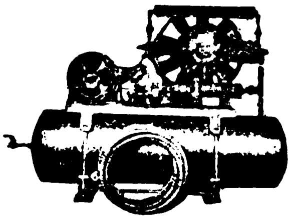
Manufactured by

J. A. DRAKE & SONS, INC., Reedley, Calif.

Sales Department: Allied Industries, Inc.

San Francisco Seattle **Los Angeles**

MONEY MAKING MACHINERY



For
Garages
Filling Stations
Machine Shops
Factories
Contractors
Ranches

GARAGE COMPRESSORS

All Sizes and Types

We offer a complete line of Garage Compressors—single and two stage, motor or gas engine drive.

Equipment is first class and prices are right.

SMITH BOOTH USHER CO.

Machinery, Industrial and Construction Equipment Supplies

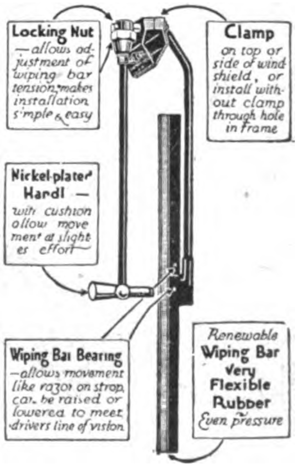
San Francisco
50 Fremont St.

Los Angeles
228 Central Ave.

Better Profits on Less Capital
with the

MALCO 3-in-1 Windshield Cleaner

Because the Malco 3-in-1 is a universal windshield cleaner, you don't have to stock a variety of types. This means less invested capital and larger net profits.


Locking Nut —allows adjustment of wiping bar tension, makes installation simple & easy
Clamp on top or side of windshield, or install without clamp through hole in frame
Nickel-plated Handl — with cushion allow movement at slightest effort
Wiping Bar Bearing —allows movement like razor on strop, can be raised or lowered to meet drivers line of vision
Renewable Wiping Bar Very Flexible Rubber Even pressure

The Malco fits any car, open or closed. Can be installed in three different ways. Clamps on top or side of windshield—or thru hole in the frame. Sells for only $1.50.

JOBBERS, DEALERS—Sell the Cleaner with the unlimited guarantee, together with the other Malco Products. Write for complete details.

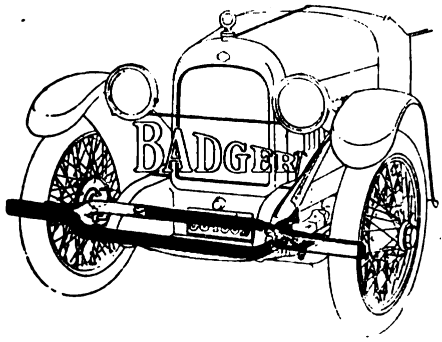
MALCO PRODUCTS CORP.

Salt Lake City, Utah

New Things in the Accessories Field

BADGER BUMPERS IN WEST.

Badger Mfg. Corp., Milwaukee, Wis., manufacturer of Badger shackle type spring bar bumpers, reports that its Pacific Coast business has been expanding at an extremely satisfactory rate. E. R. Monore, 1317 S. Figueroa St., Los Angeles, who has been the company's Western representative two years, has handled a 100 per cent increase in sales in the past 12 months over the preceding similar period. Through him were sold one and a half carloads of Badger bumpers to Motor Mercantile Co., Salt Lake City, and another carload to Motor Hardware & Equipment Co., San Diego, recently.



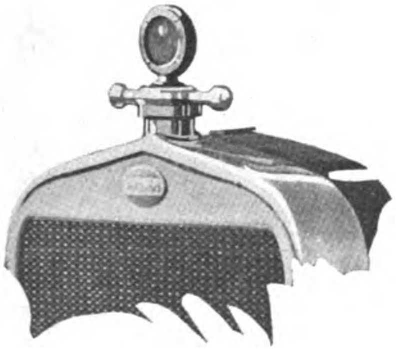
THE BADGER BUMPER.

NEW ERA JUNIOR PRICES.

New Era Spring & Specialty Co., Grand Rapids, Mich., manufacturers of Duplex double bar spring bumpers, has reduced the price of the Junior Duplex bumper for Ford, Chevrolet and Overland to $12 in black, instead of $14.50; and in nickel, to $13.50, instead of $16.50. Bumper prices for other small cars remain at $14.50 black, and $16.50 nickel. The large Senior Duplex, for medium and large cars, remains at $20 for black, $22 for nickel.

FLETCHER LOCK.

Recent popularity of motor car tests, with radiators, fuel tanks and oil reservoirs sealed, has made prominent the Fletcher motor meter lock, a device which securely locks the radiator cap and which cannot be unlocked in any way, it is claimed, without the key. In the recent sealed Oakland car nonstop run from Los Angeles to San Francisco, the radiator was locked by George F. Stephenson, official A. A. A. observer, and the keys held by his appointee throughout the run. This insured authentic results when the car was refilled at the end of the 18 hour run. It required but ½ pint of water to restore the original quantity. Harry Neville, the Oakland's driver, claims that the Fletcher lock also conserved the water in the radiator by providing a water and steam-tight cap and preventing the escape of vapor in the radiator.



FLETCHER MOTOR METER LOCK.

The fuel tank can also be locked in the same way, as the bushing can be screwed into the tank's filler neck, and the lock applied. The Fletcher cap does not screw on, and cross arms do not interfere with the body or other obstructions close to the tank filler neck.

In the recent 1889 mile Dort car test, the radiator was sealed with a Fletcher. The car twice climbed over mountains more than 7000 feet high and traveled up San Joaquin Valley through weather worse than 110 degrees. Only one quart of water was required to refill the radiator when unlocked at the end of the test. Harry F. Joy Co., 1311 S. Figueroa St., Los Angeles, is distributor of the Fletcher motor meter lock.

DOWMETAL PISTONS.

About a thousand feet beneath the city of Midland, in Central Michigan, where is located the factory of Dow Chemical Co., manufacturer of Dowmetal pistons, runs a river, or perhaps several rivers, strongly charged with brine containing calcium, magnesium, strontium, bromine, sodium and chlorine. Forty wells pump the brine to the surface, and by various processes there are separated from it the basis of photographic emulsions, medicines, cement, tanning materials, perfumes and cold storage preservatives.

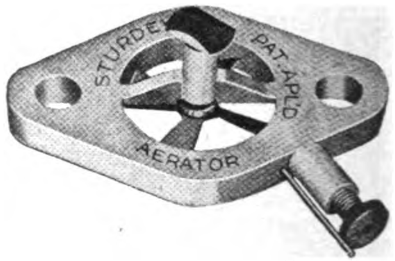
The magnesium was used for war flares, combating the great ingenuity the Germans also showed in use of magnesium products. But most interesting of all, probably, is the fact that combined with an alloy by a secret process it develops a metal only one-third as heavy as aluminum, which sustains a pressure of 24,000 pounds per square inch. Equipped with Dowmetal pistons, a car was run 30 miles an hour for 35,000 continuous miles, and it is claimed that upon inspection the pistons showed scarcely a sign of wear.

MAGIC SPOKE TIGHTENER.

Magic Auto Spoke Tightener, manufactured by Miller Borglum, 2001 Eye St., Bakersfield, Calif., eliminates the rattle from loose wheels by an absorption process which swells the loose spokes back to their normal size, and restores the wheel's original rigid solidity. The penetrating force of the oils, combined with vegetable matter, is made use of fully, and the tightener compound saturates the inmost pores of the wood, according to Mr. Borglum. Price $1.35 a can.

STURDEVANT AERATOR.

The Sturdevant Aerator is claimed to increase mileage 50 per cent and decrease spark plug and carbon troubles 75 per cent. It is designed for Ford and all other makes of cars in sizes according to carburetor measurements. It installs between the carburetor and inlet manifold flanges, and contains a propeller which revolves rapidly with the intake of the motor to form a scientifically correct mixture, or fine mist of air and gas, before entering the carburetor. Each cylinder also draws a uniform gas mixture, thoroughly aerated, insuring a smooth running engine and minimum of carbon accumulation.

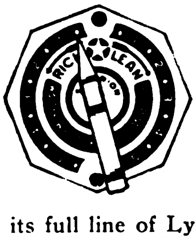


STURDEVANT AERATOR.

It is guaranteed by the manufacturers to satisfy all users, or money is refunded. Price, all sizes, $3.50. Manufactured by Federal Engineering Co., 45 Eighth St., Detroit.

EASY CARBURETOR CONTROL.

That part of the Superior carburetor control for Ford cars which is constantly before the driver's eye is a neat, attractive, meter-like device, attached to the dashboard. It obviates reaching under the dash to adjust the carburetor, and permits easy and quick adjustment to suit all variations of running conditions, for gasoline and battery economy. Packed with all fittings in individual cartons, and installed easily in a few minutes. Walter W. Biddick, 1318 South Figueroa St., Los Angeles, is distributor.



"PERFECT GUIDE"

A new 28 page catalog put out by Metal Stamping Co., Long Island City, N. Y., covers its full line of Lyon resilient bumpers and parts, and is described as a perfect guide for those interested in the sale of these accessories. There are 46 illustrations of cars, before, during and after collision; agents' portable stand; accessory dealers' stand; distributors' display rack; envelope inserts and broadsides; an attractive window display, etc. These help to make an attractive book.

Farmers own more than 50 per cent of the motor cars of the country, or more than 5,000,000, meaning ordinarily replacements of from 800,000 to 1,000,000 each year.

"BUY RELIABLE PARTS FROM RELIABLE FIRMS"

Quick service, right price and quality goods are always available from the distributors and manufacturers listed below—each a specialist in his respective line.

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- Standard Auto Parts & Gear Co., Los Angeles.
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- Triangle Parts Co., San Francisco, Oakland and Stockton.
- Piston Service Co., Fresno.
- Auto Gear & Supply Co., San Diego.

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MOTOR GASKET SEAL

GUM-ZE
Can be safely used on all gaskets, as gasket may be removed without injury. Hose connections can be removed without tearing any rubber, if applied with GUM-ZE.

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Does not injure cylinder walls or piston rings.

GUM-ZE
Does not obstruct seating of valves.

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Does not evaporate, therefore goes much farther and lasts longer than shellac.

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Is leak and compression proof.

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Is oil, water and heat resisting.

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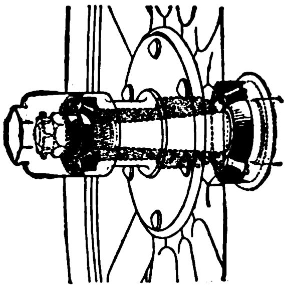
SHAFER SELF ALIGNING ROLLER BEARINGS



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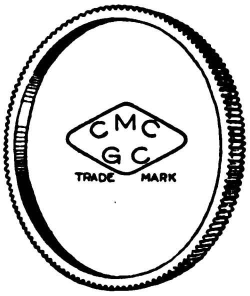

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WILL FIRE PERFECTLY IN OIL PUMPING CYLINDERS

They Will Not Foul from Carbon

The Porcelains will never crack or break.

They give More Power—More Mileage.

Every Plug Guaranteed to Fire Perfectly for 1 Year.

Made in All Sizes for Pleasure Cars—Trucks—Tractors.

They Increase the Spark About 100 per cent.

Agents and Distributors Wanted.

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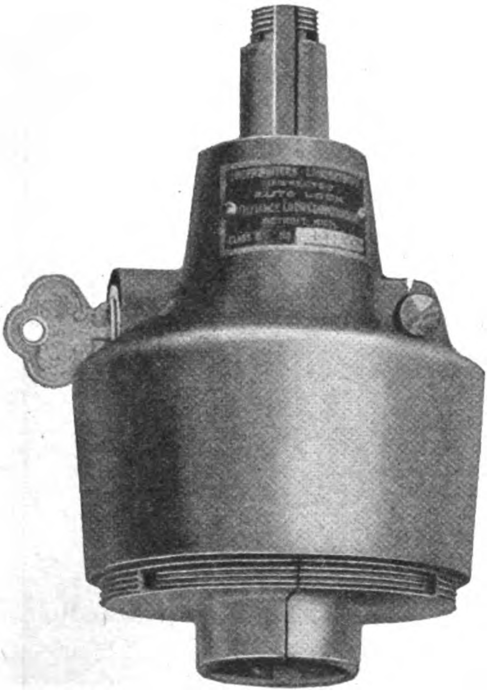
DEFIANCE LOCK.

Turning the key in the Defiance lock for Ford cars raises the gear clutch above the lower pinion, throwing steering gears into neutral. Thus the wheel is caused to revolve freely on the steering post, gears cannot be put into driving position, and the car, it is claimed, cannot be moved unless unlocked with a key. An impenetrable housing of case-hardened steel covers the steering gears completely, and it is impossible for the thief's tools to render the lock useless by tampering with the steering gears under the lock. Another feature is the safety plunger, which prevents dangerous accidental locking when the car is in motion. This is a button which must be pushed in with one hand, while the other hand turns the key. A handsomely finished 17 inch wheel with genuine walnut rim and highly polished aluminum spider arms is supplied with the lock, which, however, is furnished alone if desired. Manufactured by Disco Electric Mfg. Co., and sold through Defiance Lock Corp., both of Detroit. Lock and wheel, $12; lock only, $9.



DEFIANCE LOCK FOR FORD CARS.

CABINET SELLS CHAINS.

The Dreadnaught tire chain cabinet, furnished free to dealers handling the product of Columbus-McKinnon Co., Columbus, O., manufacturer of Dreadnaught tire chains, is a striking response to the idea voiced in the "Ask 'em to buy" campaign. Dealers installing this cabinet are turning over their stocks three times a year, compared with once a year previously, it is reported. The compact metal cabinet is painted blue, with orange lettering. It accommodates 18 or 36 similarly colored neat but strong containers, handsomely labeled, holding a set of passenger or truck chains. The whole assembly fills the casual customer with the urge to investigate further the merits of the Dreadnaught product.

These chains come in four weights—for medium sized and heavy passenger cars, trucks running on heavy pneumatics, and trucks on solid tires. The patented hook lever lock snaps open quickly to fasten or detach, and takes up slack through leverage. Cross chains are coppered, and rim chains galvanized, and rusting is absolutely prevented, it is claimed. The cross chain body is of special alloy steel, case hardened, with soft inner core to prevent brittleness.

COLUMBIA AXLE MANUAL.

There has been considerable discussion regarding the alleged too-high cost of automotive repair parts. In certain instances this may be true, says B. D. DeWeese, sales engineer of Columbia Axle Co., Cleveland, O., but it must be kept in mind that allowance of unjust claims for free replacements is often largely responsible for this condition. Abuse and lack of proper care of the motor vehicle causes damage to parts which the manufacturer is asked to replace on the plea of defectiveness.

The company believes that service costs and repair parts prices may be decreased considerably if the user is provided with proper data regarding the care necessary for automotive parts. With automobile axles a special feature, vitally needed, is correct lubrication. Accordingly, a service manual treating exhaustively every angle of the operation and upkeep of Columbia one piece housing front and rear axles is being distributed free to car and truck makers, distributors, and users. Devoted to the Columbia product, it nevertheless embraces a real educational course on automobile axle operation and requirements, set off by numerous excellent line diagrams and photographs.

CLEARVIEW CLEANER.

In preparation for that period of the year, not now so remote, when rain, mist, fog, dust or snow frequently will make car driving more or less hazardous. Yale Corp., 124 West 4th St., Los Angeles, has put on the market the Clearview windshield cleaner, for which Louis D'Eyraud, 452 West 16th St., Los Angeles, is Pacific Coast distributor. Through its export division, Yale Corp., headed by K. M. Turner, inventor of the dictograph and said to be the first to broadcast opera by wireless in 1909, has secured an excellent reception for this windshield cleaner in England and Australia. It is operated by a short form of crank handle at one side of the windshield, convenient to the driver's left hand. It cleans on the downward stroke, clearing upper and lower glass in one motion, and does not interfere with opening or closing of windshield. When not in use it folds down, practically out of sight, resting along the division between upper and lower windshields. Price $2.50.

TEL-U-LEVEL GAUGE.

The Tel-U-Level oil gauge for Ford cars consists primarily of a trap which is installed under the car where bottom petcock is removed from the crankcase, a copper tube containing air which leads from trap to dash or instrument board, and the indicating instrument on the dash. It operates by air, has no moving parts to get out of order, and is not affected by occasional flushing out of old crankcase oil. After installation, a 30 minutes job, 4 quarts of oil are put in the crankcase, bringing the oil level in the tube to within about ¼ inch of the upper mark on the instrument board. This shows the crankcase oil level to be just above the upper petcock, which is the proper filling level. Manufactured by Berge-Rathbun Co., 4-6 Alden Court, Boston, Mass. Price $5.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

STAR REBOUND CONTROLLER.

Star rebound controllers are manufactured by Kulas-Snyder Mfg. Co., Cleveland, to eliminate road shocks by maintaining absolute control of the car springs during the entire rebound. They have no effect on spring compression, which does not break springs and is limited by the resistance of the springs themselves and the car body and frame.

There are only four movable parts—rotating drum, belt, spring, and swivel hook. Adjustment to meet the smooth-riding needs of any car is made through changing the spring tension by rotating the star shaped spring on the outside of the circular housing and fixing it in any one of five depressions. Resistance to rebound is by the coil spring acting with the frictional resistance of the wood drum rotating between thrust bearing and cone shaped friction plate. Resistance is increased with the severity of the rebound.

STAR REBOUND CONTROLLER
CLEVELAND

STAR REBOUND CONTROLLER.

Made in three sizes. A set of four for Ford cars costs $20; for medium-weight cars, $30; for heavy cars and trucks, $40.

DREDNAUTS STRONG IN SOUTH.

H. S. Quick, sales manager for Auto Specialties Mfg. Co., St. Joseph, Mich., maker of Drednaut shock absorbers for Fords, reports Drednaut sales very active in the South. J. W. Kelley, manager of Thos. E. Scott Sales Co., Atlanta, has put his company on the map with a record sale of more than 2800 sets of Drednauts in five days, a remarkable achievement, considering that they have been on the market in Atlanta only a short time. Mr. Kelley's largest order was for only 100 sets, from the Jacksonville, Fla., dealer, and he sold in quite a number of places to make such a large grand total.

NO-FLOAT CARBURETOR.

The No-Float carburetor for Fords is controlled entirely by the vacuum of the engine, and has no float, fuel reservoir or any complicated parts. No adjustments to make; the engine vacuum operation makes it as regular as clockwork, is the idea. The manufacturer, F. L. Huber Co., 219-21 North Channing Ave., St. Louis, guarantees that the steepest hill can be climbed with but one gallon in the gasoline tank, and no need for a vacuum tank. Price $7.50.

ROSE Owners Are Satisfied Customers

Easy action, quick results and long life are the features of the Rose Tire Pump that appeal to your customer. From the first time he uses it he is your friend.

Satisfied customers are a big asset to every dealer and satisfied dealers are an asset to us. Our dealers like the Rose line because it allows a liberal profit and is one they can back with their unqualified recommendation.

FRANK ROSE MFG. CO.
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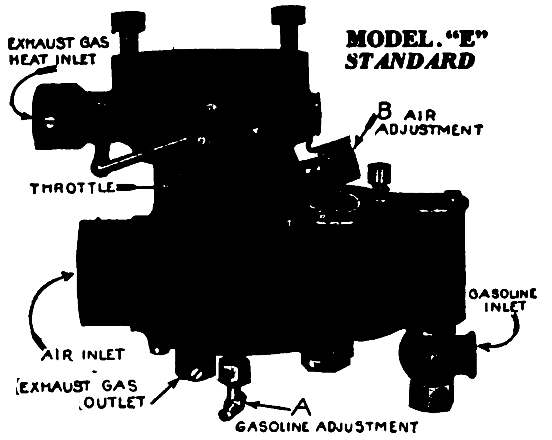
Ask 'em to buy a Rose Pump. Tell 'em about the patented valve and five-year guarantee. You'll sell 'em.



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Universal Satisfaction

POWERFUL— ECONOMICAL— SIMPLE—

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ARISTO
MOTOR OIL

Increases the Life of Your Car

Look for the "Aristo" Sign

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SPEED & POWER

The uniformity, the body, the heat resisting qualities of "Aristo" Motor Oils are safeguarded by utmost care in testing and production.

The Union Oil Company service will advise you in the selection of the various grades of Aristo Motor Oils best suited for use in the motor of your car.

It is consistent lubrication such as "Aristo" Motor Oils provide that eliminates the wear and tear on a motor and increases the life and efficiency of a Motor Car.

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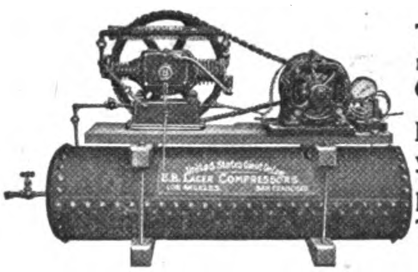
Pacific Coast Office: 304 Williams Building, San Francisco



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More reliable Today.

Many copies appear in the market but only one original.
The best with patented features

E. B. LACER

Air Compressors — Electric Motors
Los Angeles — San Francisco, Cal.
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IT IS HEAT—NOT WEAR THAT SPOILS A PISTON RING

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TRADE MARK

PISTON RINGS

Are guaranteed not to warp or lose their tension through heat, during the life of any motor in which they are properly installed.
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LEESEBERG MACHINE & MFG. CO.
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AMERICA'S FIRST SUCCESSFUL CLOSE-FITTING ALLOY PISTON

Light weight is gained, not by sacrificing metal, but by using a special alloy after our own formula.

The Patented Self-adjusting Spiral Slot, an exclusive Kant-Skore Feature, makes it possible to install Kant-Skore Pistons at the closest known clearance. And this clearance is maintained constant at all speeds. The advantage of this is apparent when it is known that loose-fitting pistons are the cause of most motor ills.

THE KANT-SKORE PISTON CO.
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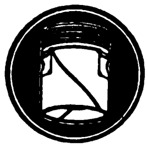

Immediate delivery on any standard or oversize on more than 600 Models of cars and trucks. Write for Price List and liberal proposition.

Kant-Skore PISTONS

WEIGH LIGHTEST · FIT TIGHTEST

MORELAND MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

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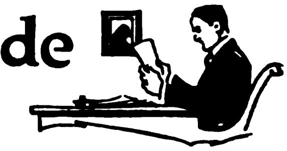
Western Trade Notes



San Francisco, Cal.—Eight Wheel Motor Vehicle Co. has been incorporated for $200,000 by Emery Winship, Rollie B. Bonn, B. H. Beecher, and others, to manufacture eight-wheel motor vehicles.—Rex M. Eaton has bought H. J. Neeley's interests in Republic Garage, 3855 Geary St.—Frank L. Kruse & Co., 724 Golden Gate Ave, has been dissolved; Thomas J. Treichel buying Kruse's interest in the business.

Oakland, Cal.—T. W. Parton has bought the interests of Albert A. Schlueter, his partner, in Fruitvale Garage, 3247 E. 14th St.—G. E. S. Company, 23rd and Valdez Sts., has been opened by Fred Gaine, Frank Elliott and Curtis Schmidt as a repair business and garage.—Calvin E. Wright will open a garage in a new building containing 10,000 square feet being built for him at 34th Ave. and East 12th St.—M. S. Bury has been made manager of Haynes Auto Sales Co., Eastbay branch of the firm of the same name in San Francisco.—Briley Battery Corp. has been incorporated for $250,000 by Louis Briley, A. J. Sloan, Edward L Kirk.—J-F-K Motor Co., dealer for Lexington and Rickenbacker cars, is now located in a large new sales room at 2919 Broadway.

Lodi, Cal.—Rice & Johnson of Lodi Motor Co., Durant agency, will have a fireproof 104x32 feet built for them on South Sacramento St.—J. H. Walters will build a garage and machine shop 36x66 feet on Central Ave. for his repair business, costing $3500.

Dos Palos, Cal.—Ernesto Ceccarelli will operate an automotive machine shop in a new garage to be built on South Dos Palos Ave., 36x40 feet.—George McIntyre has bought the interest of his partner, Noah Van Hook, in Mc & Van Service Station.

Fresno, Cal.—R. C. Bigelow has leased a $20,000 garage building to be erected at Stanislaus and N Sts., 2 stories, 75x100 feet.

Hanford, Cal.—Norman De Spain has bought the vulcanizing department of Seventh St. Garage, and will conduct it as a separate concern.—J. B. Bowden of Northwest Service Station has taken the Overland fabric tire agency.

Porterville, Cal.—E. E. Williamson has bought the L. C. Holland Battery Shop, located in Independent Garage, Main and Olive Sts, from L. C. Holland.

Delano, Cal.—Fred Fairservice and George Murray have bought Sperry Service Garage from Fred Sperry.

Wasco, Cal.—Miller, Smith & Miller of Wasco Garage have taken the Ford and Fordson agencies.

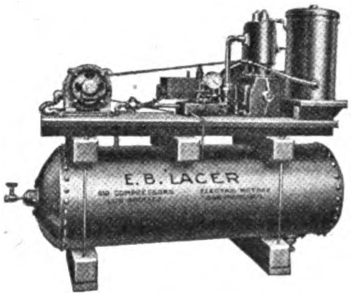
Parlier, Cal.—R. H. Galle has opened Galle's Auto Repair Co. on Main St.

Daly City, Cal.—California Automobile Repair Shop has been opened on the state highway by George Rossi and Joseph Alberti.

Palo Alto, Cal.—Harry J. Van Harney, former service expert for Chester N. Weaver & Co., San Francisco, has bought Club Garage on the state highway.

San Jose, Cal.—R. H. Fritsch of Fritsch & Molitor, Paige and Jewett dealers, has sold his interest to Thomas J. Ross, and the name has been changed to Molitor & Ross.—Pichetti Brothers & Co., 400 S. 1st St., are now agents for Earl and Liberty cars, DeMartini trucks, Reliance trailers and Hood tires.

Los Angeles, Cal.—A. H. Munro has bought L. M. Ogle's interest in Ogle-Harrison Motor Co., 1680 N. Western Ave.—Nelson & Price, Inc., Olive and 10th Sts., tire distributors, have opened a Hollywood branch at 1512 Cahuenga Ave.—L. G Rinderknecht has moved the Buick Automobile Shop from 1516 S. Flower St. to 1649 El Centro St.—W. A. Harrison has moved his automobile agency to 5850 Hollywood Blvd. from 1680 N. Western Ave.—I. H. Weaver and S. R. Walters have bought Selma Ave. Garage, 6450 Selma Ave.—Robert P. Fite, Inc, Chevrolet agency, has increased its capitalization to $500,000.—Four Wheel Hydraulic Brake Co. has increased its capitalization from $250,000 to $500,000.—Liberty Tire & Rubber Co., Star tire dealer, has occupied a fine 2 story building, 11th and Los Angeles Sts.—J. C. McFarlane will have a $13,000 garage built for him at 1701 S. Hope St.—Jack Graham has opened Wilshire Cadillac Service Station, 112 N. Western Ave.—Triangle Motors Co. has been opened at 1720 Hudson Ave.—J. G. Bennett Tire & Rubber Co. has moved from Broadway and 10th St. to 1316 S. Grand Ave.—Holley Motor Sales Co., Chevrolet dealer in Highland Park, has opened its new sales building, 5500 Pasadena Ave.—Southland Garage, 5437 S. Vermont Ave., has been bought by E. S. Fuller and G. A. Higginson.



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If it is Compressed Air 1 to 80 cu. ft. of air per min.

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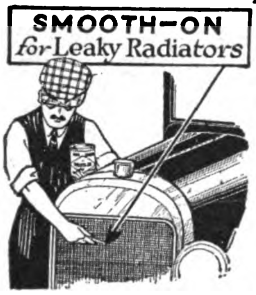

SMOOTH-ON IRON CEMENTS

No More Expensive Repair Bills

With Smooth-On Iron Cement No. 1, you can repair leaks in radiators, radiator edges, etc., both on honeycomb and tubular types, from the outside without removing the radiator, at a few cents' cost.

Write for booklet, "How to Repair Motor Radiators"—it will show you how to make radiator repairs and other repairs around cars easily, quickly and economically—it's FREE.

Smooth-On Iron Cement No. 1 comes in 6-ounce, 1-pound, and 5-pound tins. Also in larger sizes.

Sold by Hardware and Supply Stores

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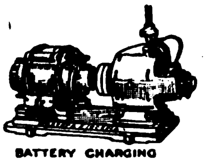
BALL BEARINGS REGROUND

Large stock of all standard sizes on hand for immediate exchange.

Special Bearings Made to Order

Factory Distributors for New
FAFNIR BALL BEARINGS
BOWER ROLLER BEARINGS

PACIFIC BALL BEARING CO.
415 West Pico St. Los Angeles, Cal.



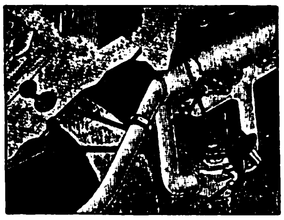
BETERBILT BATTERIES

There is a big demand for this efficient, low priced battery. We can make dealers an interesting proposition. Write for details.

BATTERY CHARGING MOTOR GENERATOR

Distributors for Delco, Klaxon, Remy and Black & Decker products. Rewinding, Starting, Lighting and Ignition Experts. Batteries Re-charged. Manufacturers of Radio Equipment.

H. N. LANDON ELECTRIC CO.
"Everything Electrical"
306 W. Pico St. Phone 641-15. Los Angeles, Calif.



Every Ford Owner Needs One

EWALD

FOOT ACCELERATOR

Safety and comfort in driving demand an independent foot speed control. Every Ford Owner who sees the Ewald buys one. Your Ford Trade will thank you for selling them an Ewald.
The Ewald works independent of the foot throttle and is unaffected by road jolts and jars.

Dealers and Jobbers—Write our sales dept. today for full details

Manufacturers
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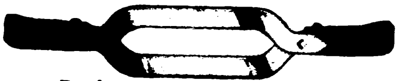
Oakfield, Wis.

Price 75c

Sales Dept.
THE ZINKE CO.
1327 Michigan Ave.
Chicago, Illinois



Sell the NEW ERA Bumper Line

It stands up for the dealer. Great beauty. Tremendous protective strength. Is permanently guaranteed. Is approved by Underwriters. Sales resistance vanishes before its many talking points. Satisfaction to users—good profits to dealer. Write for catalogs.

Duplex [illegible] "Junior"
"Senior" for medium and large cars, $20, in black. Nickel $2 extra.
"Junior," for Ford, Chevrolet and Overland, black $12.00; nickel $13.50. Other small cars, black $14.50; nickel $2 more.

Standard Spring Bumper
For Ford, Chevrolet and Overland, black $10, Nickel $11.50. Other small cars $12, black; nickel $13.50. Medium and large cars, black, $14.50; nickel $16.50.

NEW ERA SPRING & SPECIALTY CO.
73 Cottage Grove Ave. Grand Rapids, Mich.
GRAF SALES CO., Williams Bldg., San Francisco, Calif.
Also Springs, Visors, Tire Carriers

—something new—

OUR
Percentage of "Come-Backs" is less than 3%.
Exchange service is of 95% efficiency.
Stock is the largest of its kind in the world.
Workmanship and materials cannot be excelled.

We Rewind AND REBUILD Armatures

For Automobile Starters and Generators

2-Year Guarantee

Write for Price List and Discount

Dynamo-Electric Wks.

2315-17 S. Grand Los Angeles, California

Armature Tester
Ten Dollars Net

Two Plug Ignition
Ordinary Plug
SU-DIG Plug
To mag. or battery system
MORE POWER
GREATER MILEAGE
SU-DIG

DON'T TAKE OUR WORD—

ASK ANY USER OF TWO-PLUG IGNITION WHAT HE THINKS OF IT.

Greater Power, Less Gear Shifting, Increased Gasoline Mileage, And more satisfactory running of the motor in general. Costs little with SU-DIG Series Plugs. Free booklet: "How to Get More Power." Write for it. Please mention car.

Chanslor & Lyon Co., San Francisco, Los Angeles, Fresno, Oakland, Seattle, Portland. McCoy Motor Supply Co., San Francisco, Los Angeles.
Superior Motor Power Co., 77-A Spring St., N. Y.

BALL BEARINGS REGROUND

Immediate exchange on all sizes and types.

Distributors Hess-Bright New Bearings.

Ahlberg Bearing Company

1708 S. Grand

Los Angeles, Cal.

Portland San Francisco

DRAKE LOCK-NUTS

"Never Jar Loose"

SPECIFY ON UPKEEP AND NEW EQUIPMENT

USED BY BEST MANUFACTURERS

WRITE FOR SAMPLE

DRAKE LOCK-NUT CO.

PLANTS: CLEVELAND SAN FRANCISCO

SINGER PROCESS PISTON PINS

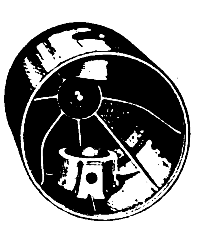
We Carry a Larger Stock of Pins than Any Exclusive Piston Pin Manufacturer in the United States

We Manufacture Piston Pins for all Makes Automobiles, Trucks and Tractors

Unequaled for quality. 200,000 in stock, ready for shipment to any point. Full particulars, prices and discounts mailed on request.

JOE SINGER MACHINE WORKS

2116 So. Los Angeles St. Los Angeles, Calif.



Look inside for the name

DELUXE

LIGHT WEIGHT CAST IRON PISTON

"The Successful Light Weight Piston" ©

See the reinforcing ribs running ACROSS THE HEAD to a reinforcing ring.

CLARK-TURNER PISTON CO.

Los Angeles, Cal.

Eureka, Cal.—Western Auto Supply Co. has opened a branch store, 4th and E Sts.

St. Helena, Cal.—Cretzer & Zannolini have opened an automobile repair shop in Money Block on Hunt St.

Arcata, Cal.—Starks & Brelle Garage has bought the vulcanizing business of Parton & Ross.

Healdsburg, Cal.—Ray Velps, Exide battery agent, has moved to larger quarters in Speedway Garage.—George C. Schelling has taken the Studebaker agency, locating in Speedway Garage on North West St.

Portland, Ore.—King Bee Spark Plug Co. has moved to larger quarters, 48 N. Broadway.

Eugene, Ore.—H. J. Bringle has opened with the Paige and Jewett agency in Howard Garage on 9th Ave.

Corvallis, Ore.—J. R. Coopey, locating in Al Stevens Bldg., on Washington St., has taken the Nash agency.—E. Nordenson has been made dealer for Oldsmobile cars and trucks, formerly handled by Whiteside & Locke.

North Bend, Ore.—Carl Golder of City Garage has bought the former Charles Thomas Brewery building on Waterfront Road for a garage and repair shop.

Monroe, Wash.—Mills Auto Co., formerly operated by A. B. and A. J. Mills, has been sold to E. F. Carryer and Ira M. Henkel.

Montesano, Wash.—Teddy Disch of Auto Repair Co. has taken over the Paige and Jewett car agencies here.

Lynden, Wash.—Walter Baldwin and Charles O. Bechtel have bought Axlund Service Station from Ben Axlund.

Everson, Wash.—Miller & Leek have sold their garage business to O. K. Garage, of Sumas, retaining the Dodge Brothers agency.

Aberdeen, Wash.—Leslie and George Thomson have bought the Annex, Broadway and Hume St., from Gray's Harbor Motors, Inc., and have changed it to Thomson's Service Garage.

Chehalis, Wash.—Bert Moore, operating Moore's Service Garage, has moved into his new garage, with Dan Russell as garage manager.

Seattle, Wash.—Pressley & Merritt, composed of C. W. Pressley and J. L. Merritt, have opened a large automobile paint shop, 1401-09 Dexter Ave.

Oakville, Wash.—Harvey & Stevens, vulcanizing shop, has added a modern electric and battery recharging department.

Vader, Wash.—W. S. Sherman will open Sherman's Garage here in a new building he is erecting.

Raymond, Wash.—Mrs. Ora Schooley has taken the Durant agency here, and has been notified by Durant Motor Co. of California that she is the first woman agent for Durants in the country.

Pullman, Wash.—Ferris Carr Repair Garage, and Willard Battery Station, separate concerns, have leased space in the new M. D. Henry Block.

Yakima, Wash.—Tourist Garage has been opened on Race St. by Jess Melbourne and Harry E. Connor.

Cheney, Wash.—Zay's Garage has been opened by G. A. Zay in the first brick garage in Cheney.

Walla Walla, Wash.—Dahlen Brothers, Ford and Lincoln dealers, have sold their interests to Arthur S. Foster, and A. C. Thomas, former vice president of Universal Auto Co., Spokane.

Renton, Wash.—Renton Garage, formerly operated by John Martin, deceased, has been bought by V. Armstrong and his son, Wayne Armstrong.

Lewiston, Mont.—Bob Terry, former owner of Atlas Garage, is now owner and manager of Corner Garage with Van Dinter Motor Co.

Havre, Mont.—Havre Motor Co., capital stock $100,000, has been formed by W. C. Lange, manager, also manager of Havre Commercial Co., and William Kendig, also of Havre Commercial Co., to handle Ford products and a general retail and wholesale accessory business.

Hamilton, Mont.—Smith Auto Co. has bought Nicol Garage, will use it for headquarters, and will consolidate both garages

Battle Mountain, Nev.—D. F. Shovelin, owner of Overland Trail Garage, is erecting one of the most modernly equipped machine shops between Reno and Salt Lake City.

Reno, Nev.—H. C. Heidtmann, with headquarters in Dorris Garage on Chestnut St., has taken the Buick agency, formerly held by Duncan-Buick Co.

Moscow, Ida.—Hugo Motor Co. on South Main St. has bought the Lange Brothers Garage, 3rd and Jackson Sts., including an accessory store.

Albuquerque, N. M.—White Garage has been changed in name to Albuquerque Motor Co.

Phoenix, Ariz.—Marshall A. Moody, 217 S. Central Ave., has been made Gill battery distributor in Maricopa, Pinal, Gila and Graham counties.

MOTOR WEST'S REGIONAL MOTOR MART

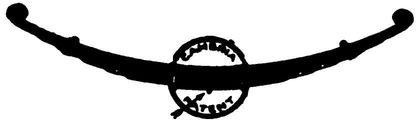
RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON RINGS PISTON RINGS

OIL KONTROL
PATENT APPLIED FOR.
RINGS
CONTROL the OIL CONTROL your TRADE
QUALITY Largest Profit RELIABILITY
All distributors for the genuine and original OIL KONTROL Piston Rings are appointed direct from the factory. Samples furnished jobbers and distributors
SUNSET MANUFACTURING CO., 1328 East Sixth Street
Los Angeles, California

SPRINGS

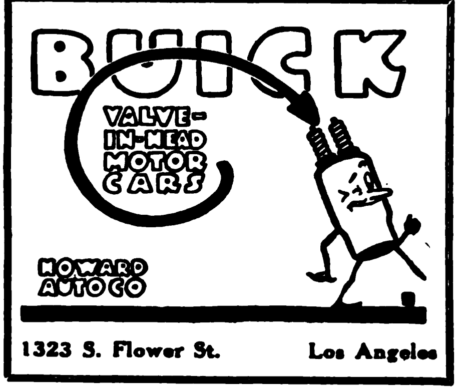
CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS



"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof

FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
Pacific Coast Distributors
Madison "Oil Kipps"
Main 3733. 916 So. Los Angeles St.

AUTOMOBILES

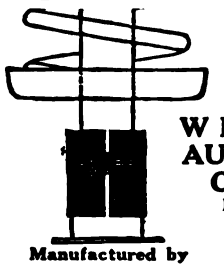


1323 S. Flower St. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

FORD VALVE ADJUSTERS

TOWNSAN VALVE ADJUSTER
Best little accessory ever put on a FORD
and the price is a trifle



WESTERN AUTO-SUPPLY COMPANY
PACIFIC COAST DISTRIBUTORS
Write for Open Territory
Manufactured by
CHADBOURNE SALES CO.
1024 Ramsey St. N. E. Minneapolis, Minn.

Locomobile Appointments.

President W. C. Durant of the new Locomobile Co. of America announces Col. E. H. Havens as vice president and general manager. Colonel Havens, as one of the receivers of the old Locomobile Co., directed the organization's affairs successfully through the period of its recent financial difficulty.

President Durant also announces consolidation of the engineering and production departments, and the appointment of D. G. Ross, former chief engineer, as production manager. E. A. Travis, in charge of the New York branch the last two years, is general sales manager.

Although the spacious plant at Bridgeport will be remodeled and rearranged, the changes and alterations will not retard production.

* * *

Demand for Nash Shares.

A rise of 165 points offered on shares of the Nash Motors shares in 4½ trading days after it was admitted to the New York Stock Exchange, indicated the extreme scarcity of the stock, which the Stock Exchange authorities listed in the amount of only 54,600 shares. At the close of the first day of trading on the big board the stock was quoted 400 bid, offered at 435. At the close of business the quotation stood at 475 bid, with none offered under 600. Meantime only 25 shares changed hands on the floor of the exchange—one sale of 15 shares at 453 and another of ten shares at 500.

* * *

Goodrich Re-enters Aircraft Field.

B. F. Goodrich Rubber Co. has announced its intention to resume the development and sale of aeronautical rubber products. The company's activities in this direction will embrace every field of aeronautics, including supplies for both lighter-than-air and heavier-than-air craft.

During the war Goodrich was very active in this field, producing various types of balloons and large quantities of tires and supplies for the Government.

The present decision to resume aerial operations has resulted in the addition to the company's personnel of Henry Wacker, an experienced and practical aeronautical man, formerly with Curtiss Aeroplane & Motor Corp. and more recently with the Aerial Mail Division of the Government service.

The Goodrich Co.'s resumption of activities in this field is significant of its belief in the future of the aircraft industry. With the experience gained during the war period, the company is well fitted to continue the development of this line of industrial merchandise.

* * *

American Motors Corp. Models Soon.

American Motors Corp., Plainfield, N. J., which Carl Page now heads, is bringing out a new series of models and is seeking information regarding equipment and parts from the manufacturers in the Middle West. C. M. Strieby, formerly with Maxwell in Detroit, now connected with American Motors, is in charge of this work. The new cars will be "dolled up," as Mr. Strieby puts it, in every model and more especially in the closed models which are being made ready for the fall trade.

* * *

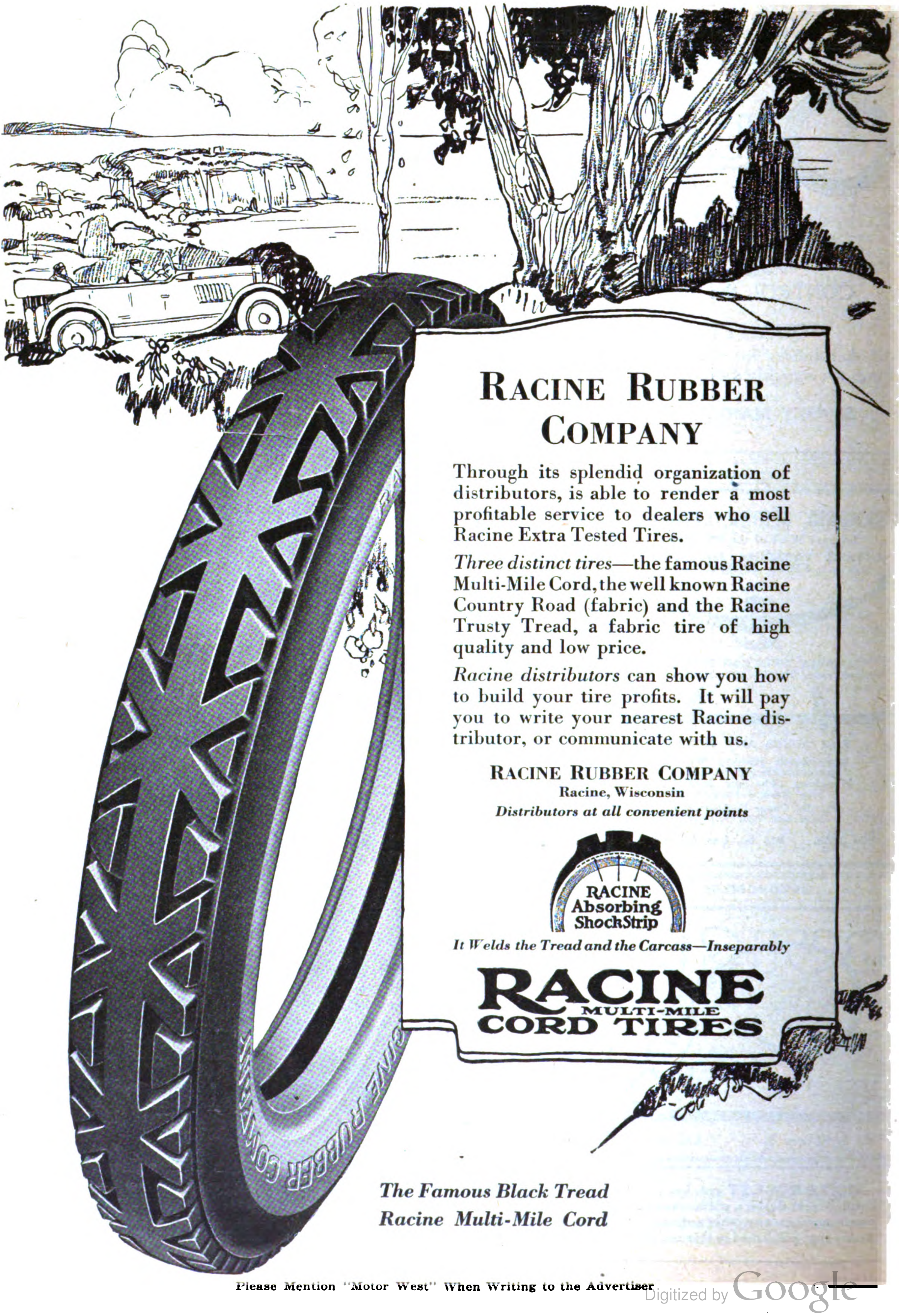
Fair for a 19-Year-Old.

Ford Motor Co. was 19 years old June 19. Against 75,000 employes at present there were 96 in 1903. Where 1,123,000 vehicles were produced in 1921, and probably 1,300,000 will be in 1922 by all plants, 195 were produced in 1903. Value of the output in 1922 is estimated at $750,000,000, against $200,000 in 1903.

* * *

Fergus Motors Receivership.

Fergus Motors of America, Inc., went into receivership August 1 at Newark, its president, Mr. Ferguson, bases his action on an alleged personal advance of $42,000.



RACINE RUBBER COMPANY

Through its splendid organization of distributors, is able to render a most profitable service to dealers who sell Racine Extra Tested Tires.

Three distinct tires—the famous Racine Multi-Mile Cord, the well known Racine Country Road (fabric) and the Racine Trusty Tread, a fabric tire of high quality and low price.

Racine distributors can show you how to build your tire profits. It will pay you to write your nearest Racine distributor, or communicate with us.

RACINE RUBBER COMPANY
Racine, Wisconsin
Distributors at all convenient points

RACINE
Absorbing
ShockStrip

It Welds the Tread and the Carcass—Inseparably

RACINE
MULTI-MILE
CORD TIRES

The Famous Black Tread
Racine Multi-Mile Cord

QUALITY SNAP RINGS

"Cast to Last"

Easy to Install
Quick Seating
Long Lived
Accurate

DEPENDABILITY REPUTATION
AUTOMOTIVE EQUIPMENT ASS'N
JUSTICE QUALITY

2,607,743 QUALITY Rings in June.

2,624,308 QUALITY Rings in July.

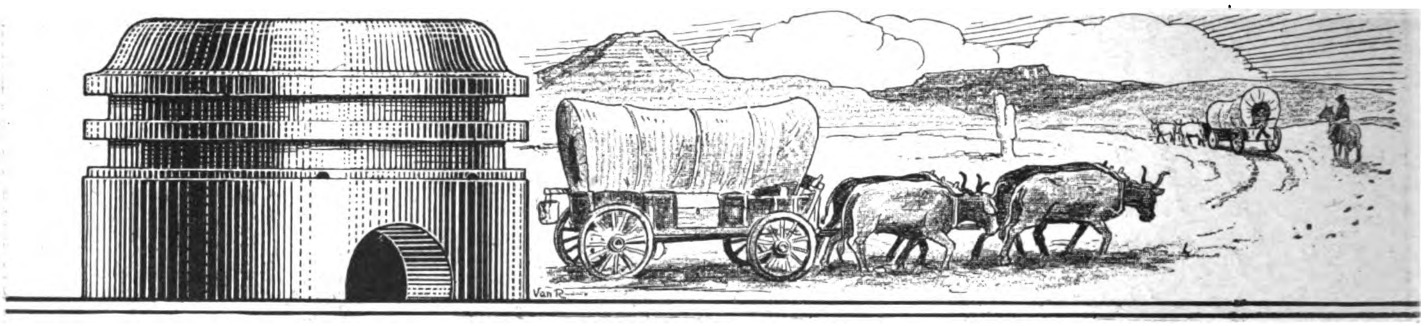
5,232,051 QUALITY Rings in two months.

A triumph for consistency in Quality, Service and Price. . . . .

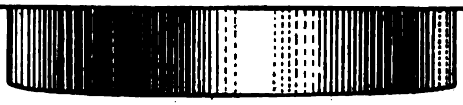
More Than a Million a Month

QUALITY SNAP RINGS
The Piston Ring Company
QUALITY
QUALITY SNAP RINGS
12-4½ .015 OVER SIZE X 5/16

THE Piston RING COMPANY
MUSKEGON, MICH.



Pioneering with Pistons!



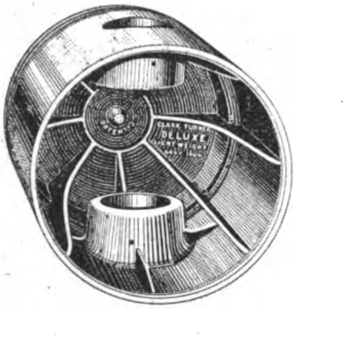
The New 11 oz.

DELUXE
LIGHT WEIGHT CAST IRON PISTON
The Successful Light Weight Piston

REX-DOME

(Catalog No. 405)

For the Scripps-Booth Oakland and Oldsmobile



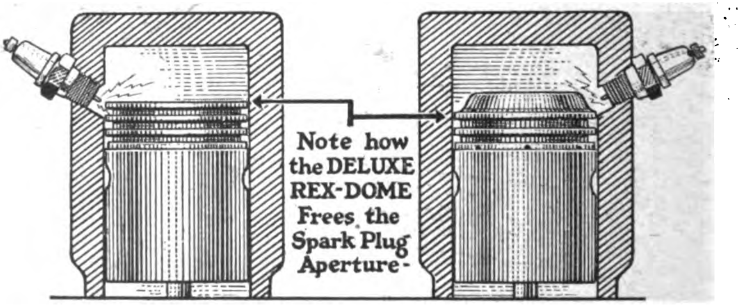
The REX-DOME embodies the scientific rib and arched construction, a basic patented DELUXE principle. Weighs only 11 ounces, yet made of cast iron. Only two three-sixteenth inch rings—reducing ring friction one-third. The different dome construction gives freer and readier combustion and better power distribution. The same compression but more power and pep. Compare the two pistons in the illustration. Supplied, semi-finished, at the new price (per piston) of............... **$2.80**

The makers of DELUXE pistons were the first to explore the field of scientific light weight construction, combined with special quality electric cast iron.

The reward of the pioneers of any field is the right of prior claim, ownership and patent protection on new and fundamental principles and methods. That is why DELUXE pistons are outstanding. Their reputation for efficiency and performance is known the world over.

DELUXE pistons combine scientifically fundamental and basically right principles of construction that other piston makers cannot employ without infringement. This position of leadership is fortified by the growing recognition that CAST IRON is the only logical and satisfactory piston material.

We are still pioneering! We are blazing the trail of *specialized* pistons. After a careful study and analysis of the particular needs and requirements of the Northway motor, we offer you the new DELUXE REX-DOME for the Oldsmobile, Oakland and Scripps-Booth.



CLARK-TURNER PISTON CO., Box 148-Station C., Los Angeles, Cal.

Please let me know about your special proposition in connection with the new DELUXE REX-DOME for the Northway motor which assures me of volume sales on this number. I am also interested in DELUXE pistons for the........................

.... Model..

Name.. Address..

I am a Motor Owner.................................Regrinder.................................Reborer.................................Repairman.................................

M.W.

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USE
EMSCO
BRAKE LINING
ITS DEPENDABLE

DIFFERENTIAL GEAR INSTALLATION

free
for the
asking

Every garageman, repairman, and machinist on the Pacific Coast is entitled to a copy of this book, without cost or obligation. You are missing a good bet if you fail to fill in and mail to us the attached coupon.

W. D. Patterson, of the Patterson Parts Co., San Francisco, writes: "I just saw a copy of your gear installation book and wish to compliment you on the very fine get-up. Frankly, Mr. Camp, this is the finest piece of work of this kind that has come to my attention for some time, and is sure to make a hit with the trade."

AUTOMOTIVE GEAR CO.
Los Angeles, Cal.
Seattle, Wash.

Send this Coupon
Automotive Gear Co.,
Los Angeles, Calif.
Without obligation or cost, kindly send me the book "Differential Gear Installation."
Name ....
Address ....
My business is ....

Bridgeport No. 16

for all size tires

Cylinder

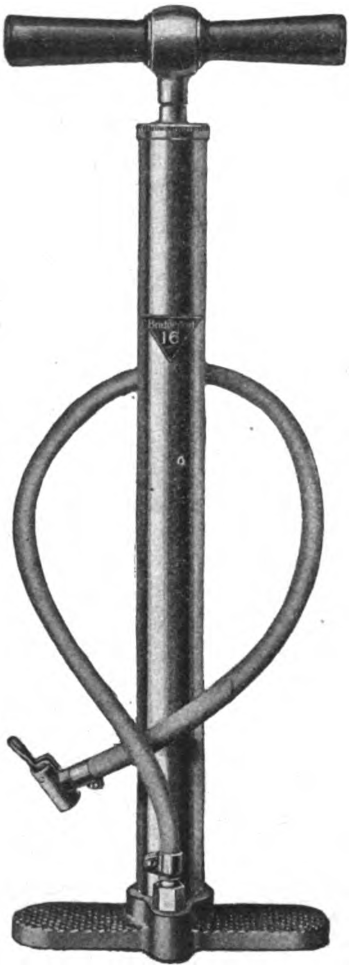
Seamless Drawn Brass will not rust. Perfectly finished inner surface insures smooth, easy operation of piston, and prevents excessive wear on leather bucket.

Piston

Equipped with patented bucket expander which automatically operates bucket under all conditions. High compression insured.

OtherFeatures

Leak-proof base connection
Check valve in base
Thumlock hose connection
Three ply long hose
Full grip handle



Easy Sales

because the superior features of the pump are obvious and quickly appreciated.

Appearance

clearly indicates the excellence of construction.

Performance

Superiority in construction details means better performance.

Guarantee

on material and workmanship protects you in your replacements.

List Price, $3.75

with liberal discount to the trade. Write for our sales proposition.

RUST-PROOF
LEAK-PROOF
Better-Built

Bridgeport Brass Company
Bridgeport 2315 Connecticut

Announcing

1923 Series

The New Oakland Six

A New Series
of the
New Oakland

The 1923 Series of the New Oakland Six-44 announced September first, embraces a line of cars distinctly new in beauty of line and in refinement of detail. Among the numerous improvements are exclusive features found on no other car.

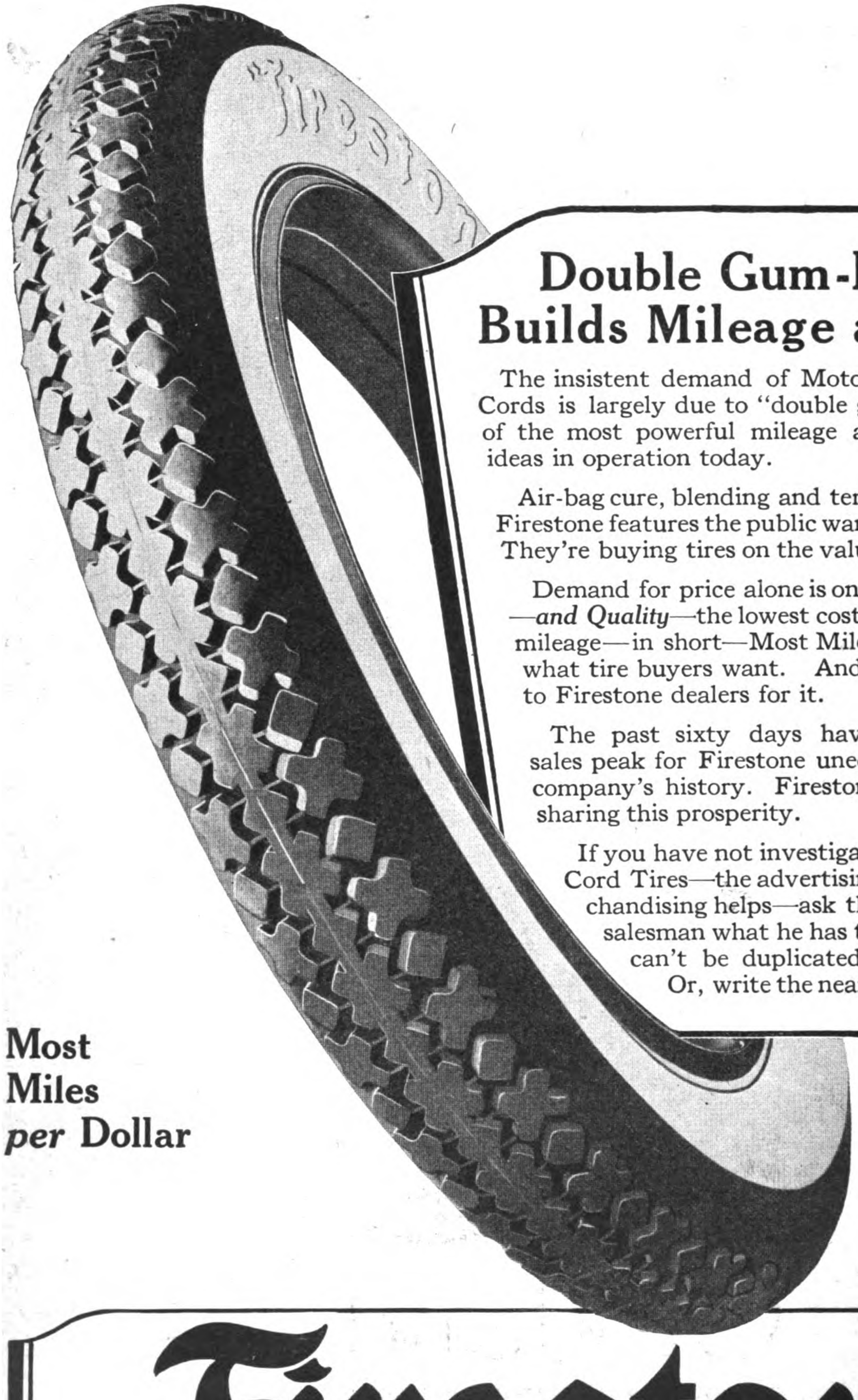
These new models, following close upon the substantial price reductions made August first, have brought to Oakland dealers everywhere a volume of business without precedent in Oakland's history.

Oakland dealers everywhere are breaking all records for sales and profits with these new models at their new low prices. Avail yourself of the unusual opportunities the Oakland franchise offers today. There are still a few territories open—communicate with the factory.

Oakland Motor Car Company, Pontiac, Mich
Division of General Motors Corporation

New Prices at Factory

Roadster -	*$ 975*	*2-Pass. Coupe*	*$1185*
Touring Car	*995*	*4-Pass. Coupe*	*1445*
Sport Car -	*1165*	*Sedan - - -*	*1545*



Double Gum-Dipping Builds Mileage and Sales

The insistent demand of Motorists for Firestone Cords is largely due to "double gum-dipping", one of the most powerful mileage and sales building ideas in operation today.

Air-bag cure, blending and tempering are other Firestone features the public wants to hear about. They're buying tires on the value basis.

Demand for price alone is on the wane. Price —*and Quality*—the lowest cost for the greatest mileage—in short—Most Miles per Dollar, is what tire buyers want. And they're going to Firestone dealers for it.

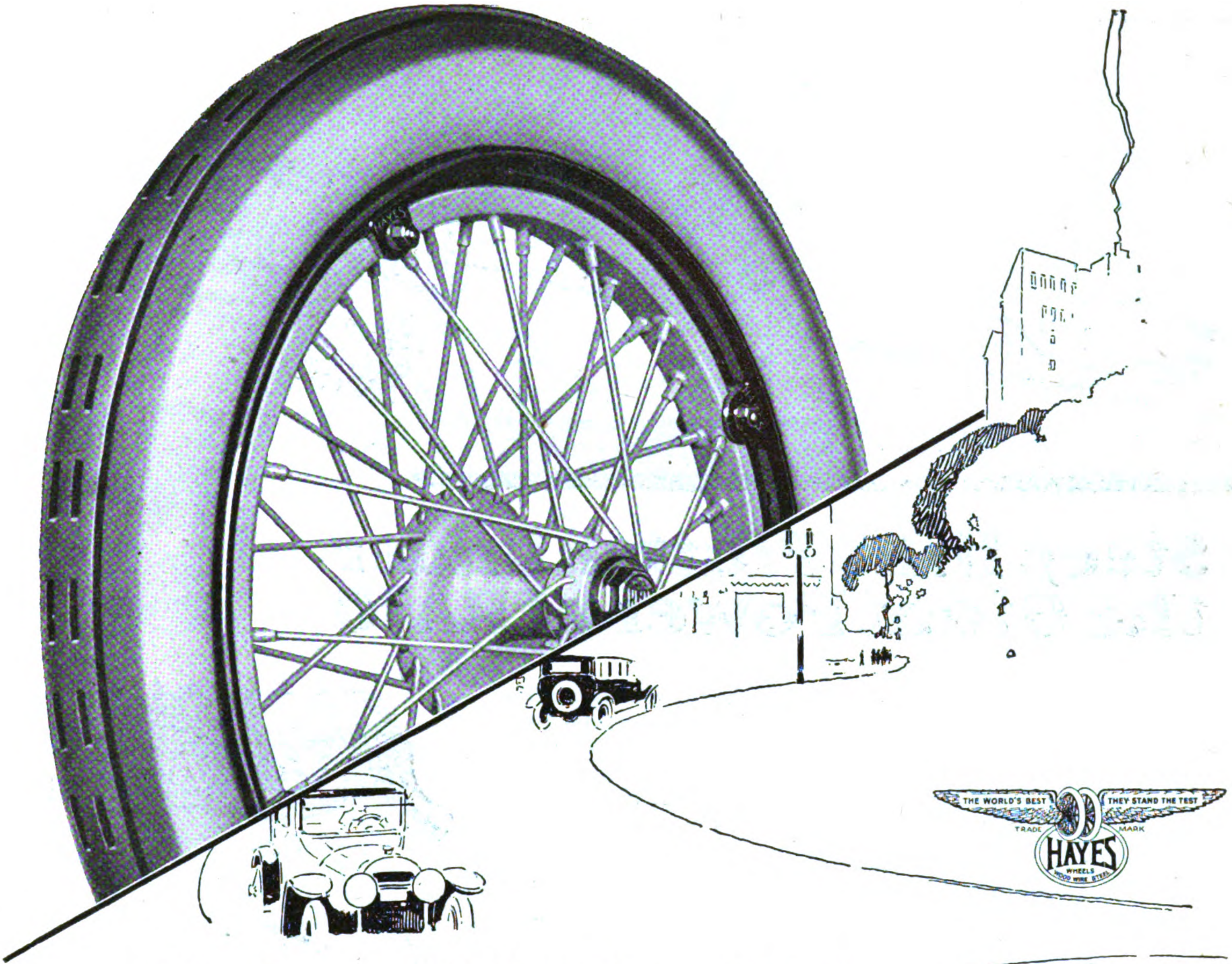
The past sixty days have produced a sales peak for Firestone unequalled in the company's history. Firestone dealers are sharing this prosperity.

If you have not investigated Firestone Cord Tires—the advertising—the merchandising helps—ask the Firestone salesman what he has to offer that can't be duplicated elsewhere. Or, write the nearest branch.

Most
Miles
***per* Dollar**

Firestone

GUM-DIPPED CORDS



Dress Up Cars—Make Extra Profits

Mail coupon below—be first in your town

SCORES of cars go by your door every day. Why should they go *by*? Bring them in to *buy*. Hayes Demountable at the Rim Wire Wheels make prospects out of hundreds of car owners. Make new *profits* on these *prospects*.

The demand is already created—people are already "sold" on "dressing up" their cars—are taking more pride in their cars' appearance than ever before.

Hayes Demountable at the Rim Wire Wheels give a car an air of individuality—of distinction—lift it out of the ordinary class and put it in a plane of its own.

Easy to install—convenient for quick tire changes—thoroughly dependable—beautiful—moderate in price—Hayes Wire Wheels **incorporate in fullest measure every one** of the features for which wheel-wise motorists have been waiting.

The name Hayes is already sold to motorists. You know—everyone knows—that Hayes means thorough dependability in wheels. Of all cars produced, 54% are Hayes equipped. The same immense resources which have made this possible are back of Hayes Wire Wheels—back of you when you sell them.

They sell at sight. Every owner of a Ford, Chevrolet, Earl, Durant, Nash, Dodge and other cars is a prospect. Your sales field is unlimited.

Send the coupon today for complete descriptive literature and details of our sales plan. Learn why Hayes Wire Wheels ***sell for less*—why *you make more*.**

HAYES WHEEL COMPANY *of New York* JACKSON, MICHIGAN

Branches: **New York Chicago San Francisco Indianapolis**

Stocks Carried in Principal Cities
WESTERN COAST DISTRIBUTORS

Bennett-Tormey Co.,
Grand Ave. at 15th St., Los Angeles, Cal.

McAlpine-Schreiner,
1520 Tenth Ave., Seattle, Wash.

Marshall-Wells, Ltd.
Vancouver, B. C.

HAYES WIRE WHEELS

DEMOUNTABLE AT THE RIM

EXTRA PROFIT COUPON

The Hayes Wheel Co., Jackson, Mich.

GENTLEMEN:—

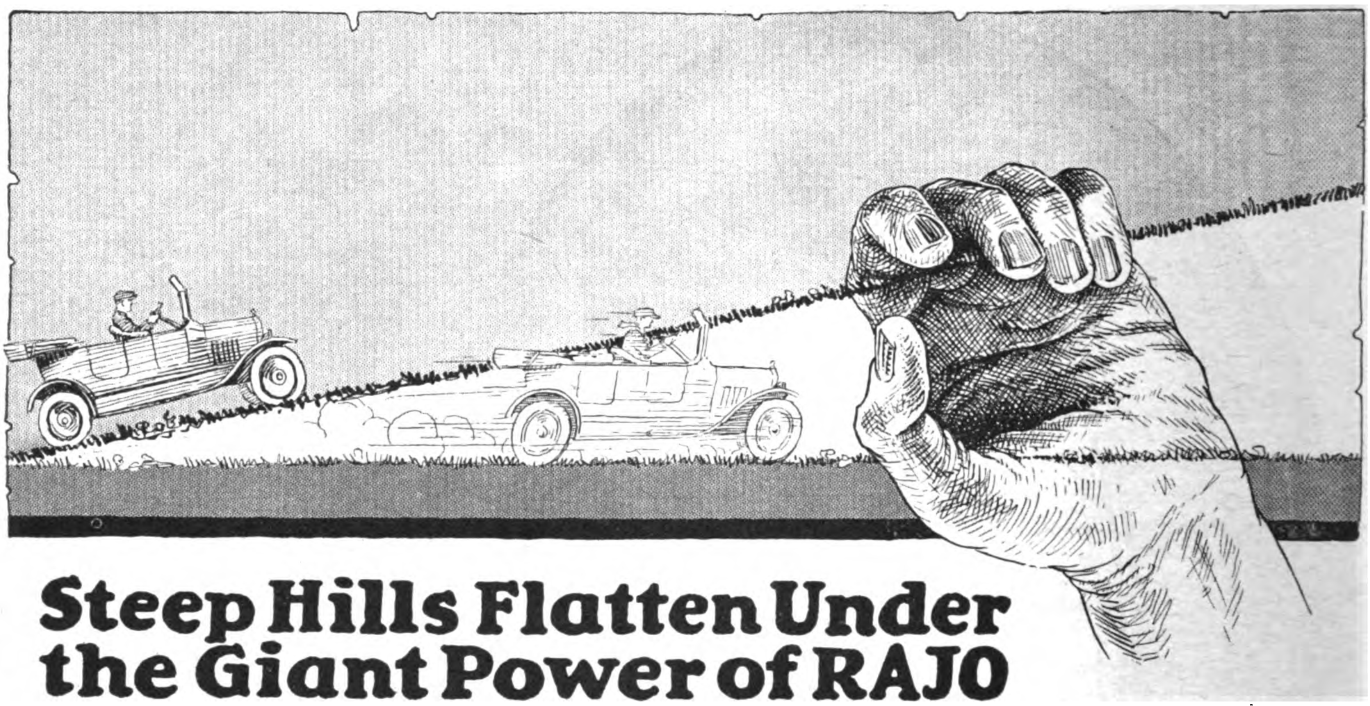
Show me why Hayes Wire Wheels are sure-fire sellers—how I can sell them for less and make more money. It is understood that this places me under no obligation.

Name ____________________

Address ____________________

City __________ *State* __________ 33F

NOTE:—If you are not a dealer, and want to purchase a set, we will be glad to refer your inquiry to the nearest dealer handling Hayes Wire Wheels.



Steep Hills Flatten Under the Giant Power of RAJO

Power! The Rajo Valve-in-Head of the past had it in abundance—but the new RAJO delivers even more! Hills flatten out—disappear!—under the responsive, seemingly effortless flow of power from this wonderful Ford attachment. The steepest grades can be made in high gear without retarding your spark. The RAJO makes a bear-cat out of any Ford. Adds 50% more power to the motor.

And speed! You can ease the little old bus from 5 to 40 miles in 14 seconds flat, and in a few seconds more run her up to 45, 50—and even beyond if you really want to! All with standard gear ratio. You can walk right past the best of 'em on the open road—and with the RAJO snappy pick-up you can scoot past street cars and slow-moving traffic like an airplane zooming past a flock of balloons!

And mileage! If the owner of the RAJO-equipped Ford doesn't get 25 miles to a gallon of gas, he figures that something is wrong with his engine!

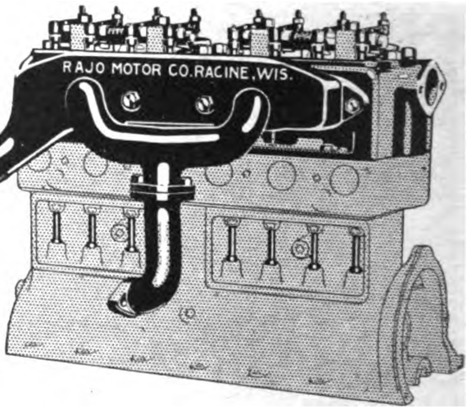
It's a simple job to put this Head on any Ford—and the price is within your reach. Write today for complete information. Just say: "Tell me all about the Rajo Valve-in-Head".

Western Auto Supply Co.

Distributors West of Denver

In making inquiry to this advertisement, write the Western Auto Supply Company store nearest you. Branches: Los Angeles, Long Beach, Pasadena, San Bernardino, San Diego, Bakersfield, Fresno, Stockton, San Francisco, Sacramento, Oakland, San Jose, Seattle, Tacoma, Bellingham, Yakima, Spokane, Portland, Boise, Denver, Phoenix.

RAJO MOTOR COMPANY, MANUFACTURERS,
136 Racine Street, Racine, Wis.



REASONS FOR RAJO PERFORMANCE

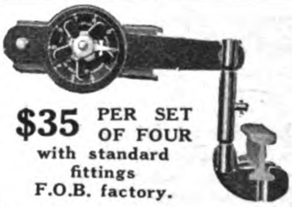
The improved Rajo Valve-in-Head has a duplex "hot spot" intake. This insures gas being taken into the cylinders in a fine, pre-heated cloud of vapor that is highly combustible. Full power is developed from the fuel and there is no waste. This thorough vaporization also does away with hard starting, bucking, and slow acceleration. The almost double capacity Tungsten steel valves thoroughly clear each chamber of dead gas and admit a full, unrestricted, flow of fresh, carbureted gas.

The duplex hot spot intake, exceptionally large valve area, direct firing, and better cooling of the improved Rajo Valve-in-Head are some of the reasons for Rajo phenomenal performance.

RAJO
VALVE-IN-HEAD FOR FORDS

They Can Tell You Better Than We Can!

Edward V Hartford
35 Warren St
New York



$35 PER SET OF FOUR
with standard fittings
F.O.B. factory.

"I did not imagine that anything could transform the riding qualities of my car like this new Hartford has done. I have not been able to find a road condition under which it does not work perfectly. It is the ideal shock absorber that I have been wanting for years. If I couldn't get another set, I wouldn't part with this one for several times the purchase price."
E. S. Firestone,
Firestone Tire and Rubber Co.

"We think this new Hartford Shock Absorber a fine one. It is, in fact, the finest one we know and the only kind we shall ever use or recommend to a customer."
Earl Grimm,
Fairview, Ill.

"The improved Hartfords we installed in December on our seven-passenger Stearns-Knight have demonstrated to our entire satisfaction all you claim for them; our past two months' driving over rough, frozen country roads at our former rate of speed with added comfort has convinced us the new Hartford is indispensable."
B. Tucker,
John Tucker Co.

"I find you have in this new model Hartford one of the most satisfactory devices of this kind I have ever tried."
H. A. Tarantous,
Managing Editor, "Motor."

IF we were to tell you what a wonderful improvement the new Hartford Shock Absorbers make in the riding qualities of **any car,** you would probably put us down as over-enthusiastic about our own product. But when hundreds of thousands of motorists, garage owners, mechanics and automotive engineers declare that the new Hartfords are the greatest springs-control at **any price**—it can't help but hit the bull's-eye of truth! Read what the folks who are now enjoying Hartfords say. Don't you believe that it will pay you to sell a product that makes such warm friends?

EDWARD V. HARTFORD, Inc.
35 Warren Street New York City

The New Improved

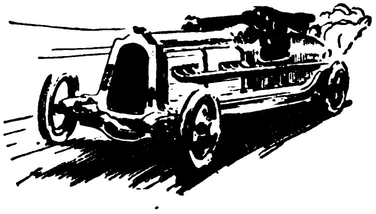
Hartford

SHOCK ABSORBER

"Makes Every Road A Boulevard"

PACIFIC COAST DISTRIBUTORS

Reynolds & Reynolds, Tacoma, Wash.
Reynolds & Reynolds, Seattle, Wash.
Henry Lansdale, Los Angeles, Calif.
Wiggins Co., Inc., Portland, Ore.
Salt Lake Hardware Co., Salt Lake City, Utah.
Chas. H. Burman, San Francisco, Calif.



"I have ridden everything from .... to .... absorbers and Hartfords surpassed all my expectations of them. They ride like $200.00 instead of $35.00, for I do not know of anything like them under that price. We have street crossings that look like the garages built them, and I took them without the least jar to the passengers in the car. I am for Hartfords 100%!"
H. A. Good,
Yellowstone Trail Garage.

"We think it may be of interest to you to know that Messrs. Rolls-Royce, of Derby, have, after exhaustive tests of all sorts of shock absorbers, definitely decided to advise their customers to fit Hartfords to their new Rolls-Royce cars, and we are receiving orders weekly from this firm for a certain proportion of their sporting cars."
T. B. Andre & Co., Ltd.
London, England.

"World's record for speed. Sunbeam Hartford equipped."
Andre.

Practically every racing driver in every great race for the past fifteen years has protected his car by using Hartford Shock Absorbers. Over half a million motorists are getting more pleasure from motoring by having their cars Hartford equipped. Many American and European cars use Hartfords as initial equipment.

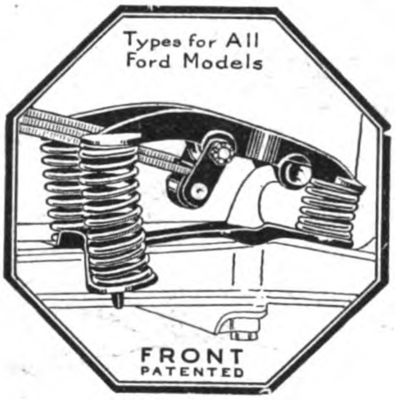
Please Mention "Motor West" When Writing to the Advertiser

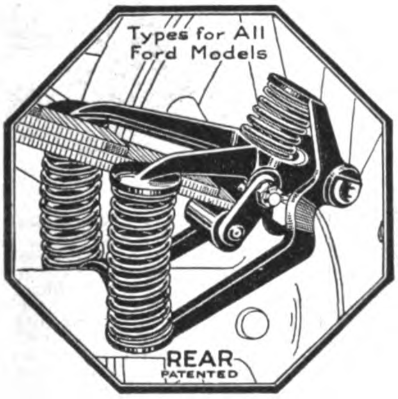
BURPEE-JOHNSON

PATENTED

FloatAforD

SHOCK ABSORBERS





Open and closed car types same price. Types for external brake car no extra cost.

"Third" spring makes them better.

Do not bind, clamp or break springs.

You get real riding comfort with FloatAforDs. The "third" spring—an exclusive feature—absorbs all the rebounds and holds the car steady without the annoying sideway. The heavy down thrusts are cushioned by the two coil springs. The "third" spring makes FloatAforDs work both ways for easier riding.

FloatAforDs do not bind, clamp or break the Ford springs. They work in full harmony with them. The body of the car is not raised out of its normal position when FloatAforDs are installed.

Continued use shows decided saving in tire, fuel and depreciation costs. We positively guarantee against spring breakage. Burpee-Johnson FloatAforDs are low priced.

Our Dealer plan is most fair; only a small investment is required. Thousands of sets are in use today. Sell them on a ten-day trial refund basis. Rear shocks come fully assembled.

Big Market. Quick Sales. Good Profits.
Sell this line. Write for prices.

Western Distributors

The Noble Co., Figueroa at 18th, Los Angeles, —Southern California.

U & J Carburetor Co., 357 Van Ness Ave., San Francisco,—Northern California, Hawaiian Islands.

Ballou & Wright, 1515 12th Street, Seattle, Wash.

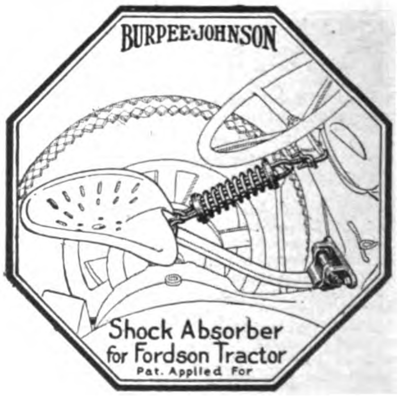
Ballou & Wright, 89-95 N. 10th St., Portland, Ore. — Washington and Oregon.

Fordson Tractor

SHOCK ABSORBER

This wonderful accessory made for the Fordson seat gives added comfort to the driver and insures greater day's work from the tractor. The bumps and jars from the rough ground in fields or on highways are absorbed and the driver remains at the wheel.

The spring is quickly and easily attached as there are no holes to drill. The added comfort means much to the driver in saving his physical strength. Made from high-grade materials, fully guaranteed. See this at your Fordson dealer, today. Write these distributors for literature.


BURPEE-JOHNSON
Shock Absorber for Fordson Tractor
Pat. Applied For

Burpee-Johnson Company, Mfrs.

Canadian Office and Factory: Automotive Products Co., Ltd., 510 King St., East Toronto

1918 Singleton Street **Indianapolis, Ind.**

Everyone will use Chains more when they discover

OFF'N'ON CHAINS

For you can put them on and take them off in a hurry. And you can put on a new cross chain quickly anywhere, any time.

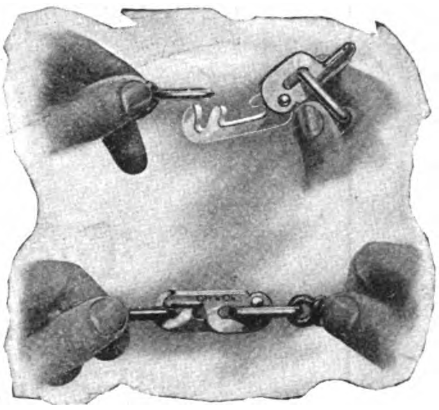
This means more chain sales—*more OFF'N'ON Chain sales*—more profits for dealers.

Order from your jobber today. At the same time, spare cross chains should be ordered. You can sell an extra set with every chain.

Write at once for further particulars, giving the name of your jobber.

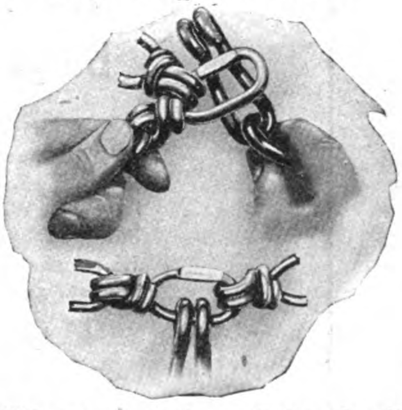
When your fingers close the lever lock the slack is taken up and the chain is absolutely secure.

The Positive Lock



This patented lever lock makes it easy to put them on and to take them off. It takes up slack; thus saves wear on tires and chains alike. No more lost chains—no more loose chains.

The Slip-on Link



This patented slip-on link makes it easy to take off the old cross chain and put on a new one. A child can do it.

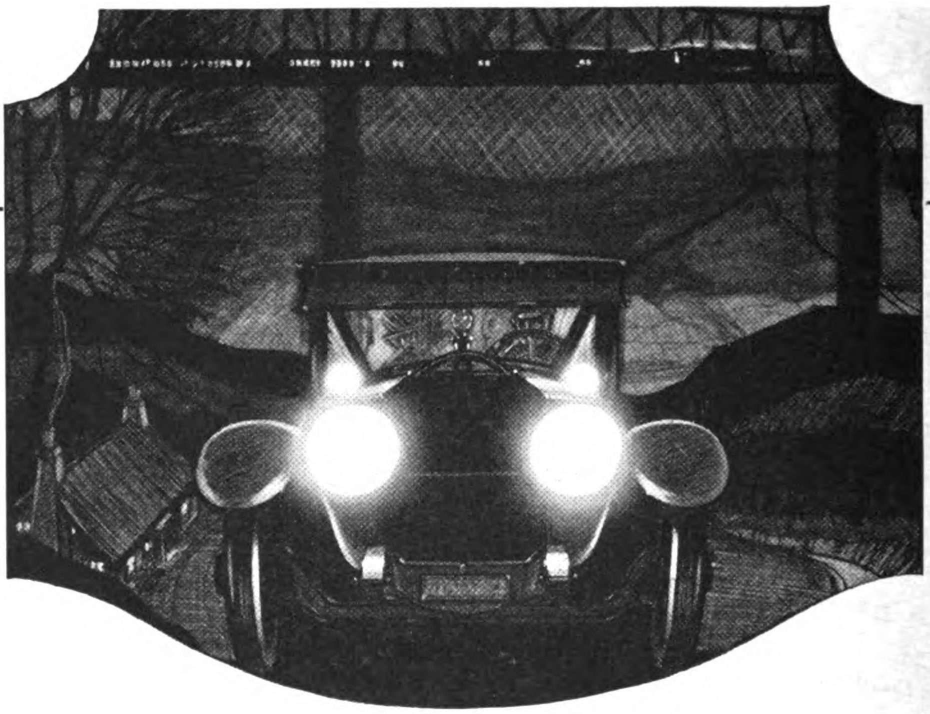
PYRENE MANUFACTURING COMPANY

Makers of Pyrene Fire Extinguishers

520 Belmont Ave., Newark, N. J.

BRANCHES:

CHICAGO—17 So. Jefferson Street
KANSAS CITY—1712 Grand Avenue
ATLANTA—24 Nassau Street
SAN FRANCISCO—977 Mission Street



THE favorable impression of Westinghouse-built products has led users to expect more than ordinary quality or service from everything bearing the name. Westinghouse Batteries will not be permitted to disappoint them.

The car manufacturer or owner who wants the very finest battery Westinghouse can build, is offered the oversize *Westinghouse Standard* with unusual guarantee features.

For the lighter-weight cars—for the man who wants the lowest-priced *good* battery he can buy, Westinghouse makes the rubber-case *Westinghouse Wubco Special.*

And to the dealer or battery service operator who is impressed with the advantages an association with Westinghouse unquestionably carries, Westinghouse offers an attractive sales proposition.

WESTINGHOUSE UNION BATTERY CO.
Swissvale, Pa.

WESTINGHOUSE

BATTERIES

It Costs More to Make a Motor Car Right. But it Pays

On no other points are the interests of the distributor, dealer and manufacturer of a motor car so close together today as on the size, quality, performance, price and operating cost of the car.

There are as many "standards of value" as there are price groups. There is no doubt, however, that one of the most attractive markets of the future belongs to the car which unites performance with substantial size, comfort and quality, reasonable price and low running expense.

It costs more to produce a motor car that will travel 100,000 miles and make no compromises with comfort, performance and economy along the way. *But not enough more* to require a price that puts it beyond the reach of a million Americans who can afford such a car if it strikes the right balance between size, quality and cost.

The Stephens Six is built to strike that balance. The 5-passenger touring car costs $1595. With a wheel base of 122 inches, it has room for luxurious comfort. Its body is hand-built and hand-finished—twenty-seven painting operations alone. Its seats are 18 and 20 inches deep, with Marshall spiral springs under thick cushions of crisp, curled hair and hand-buffed high grade leather.

Its Stephens-built, valve-in-head motor develops 59 horse power—more than double the rated energy for a motor of its size. With superb performance, it combines low upkeep cost and twenty thrifty miles per gallon. Acceleration is unusual—from standing start to 50 miles in 20 seconds.

The Timken axles, Fedders radiator, full alloy-steel springs and Gemmer steering gear with the new spark and throttle controls—no quadrant on the steering wheel—have to be oversize and first quality to match the Stephens-built units.

Thousands of Stephens motor cars have been made and sold. Owners, distributors, dealers alike are enthusiastic. If Stephens is not represented in your city, write today for our contract terms and discounts. The Stephens strikes the right owner's balance.

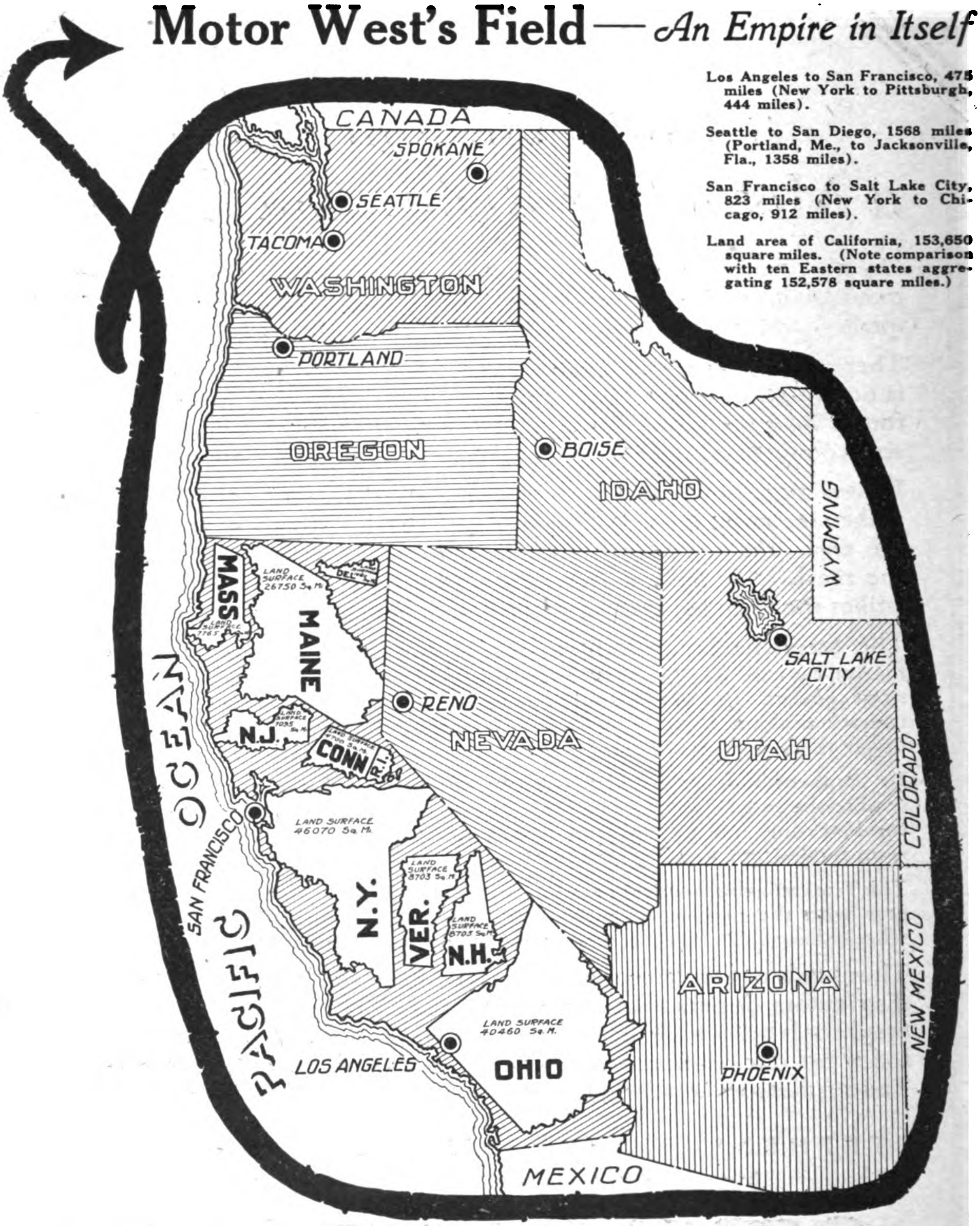
R. W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

Motor West's Field—*An Empire in Itself*


CANADA
SPOKANE
SEATTLE
TACOMA
WASHINGTON
PORTLAND
OREGON
BOISE
IDAHO
WYOMING
MASS
LAND SURFACE 26750 Sq. M.
LAND SURFACE 7765
DEL
MAINE
LAND SURFACE 7035 Sq. M.
N.J.
LAND SURFACE
CONN
R.I.
RENO
NEVADA
SALT LAKE CITY
UTAH
PACIFIC OCEAN
SAN FRANCISCO
LAND SURFACE 46070 Sq. M.
N.Y.
LAND SURFACE 8703 Sq. M.
VER.
LAND SURFACE 8703 Sq. M.
N.H.
COLORADO
ARIZONA
NEW MEXICO
LAND SURFACE 40460 Sq. M.
OHIO
LOS ANGELES
PHOENIX
MEXICO

Los Angeles to San Francisco, 475 miles (New York to Pittsburgh, 444 miles).

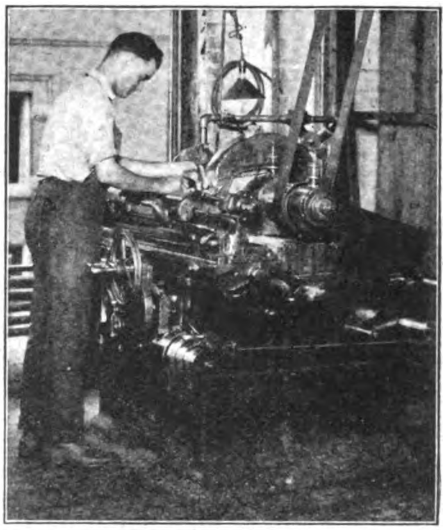
Seattle to San Diego, 1568 miles (Portland, Me., to Jacksonville, Fla., 1358 miles).

San Francisco to Salt Lake City, 823 miles (New York to Chicago, 912 miles).

Land area of California, 153,650 square miles. (Note comparison with ten Eastern states aggregating 152,578 square miles.)

Motor West's field takes one-sixth of the product of the automobile and accessory factories of the United States. On the other hand it produces the great bulk of some of the foods and other commodities consumed by the rest of the country. In industrial production, note its ten-year increase in number of factories—86 per cent; in factory hands—97 per cent; in annual factory production—187 per cent. What Eastern plants do not adequately supply it, it soon will supply itself. Its raw materials, such as cotton, hides, etc., are as near to its manufacturing centers as those in the East are to factories there. Climate favors it, too—the Mare Island navy yard near San Francisco produces 25 per cent more than other navy yards, for the same labor cost. Living conditions are ideal, unemployment less, slums unknown, power is plentiful. The water power resources of 11 Far Western states total 42,850,000 horsepower; of the rest of the country, only 20,640,000. The installed capacity of these 11 Far Western states has only begun—in 1920 it was only 2,515,000 horsepower, of which California supplied 1,228,000; the Pacific Northwest 585,000; Intermountain and Southwest states 702,000; but by 1930 the total installed capacity of the region will be 5,352,000 horsepower. California's plans alone, for the decade, call for expending $500,000,000. To see the region's possibilities, consider that even 100,000 horsepower will run 1300 factories producing $140,000,000 in goods annually, and will serve also for very much more than that in irrigation, transportation and lighting.

Kant-Skore
PISTONS
THE KANT-SKORE PISTON CO.
CINCINNATI, OHIO
Kant-Skore
PISTONS
WEIGH LIGHTEST
FIT TIGHTEST
THE KANT-SKORE PISTON CO. CINCINNATI, OHIO.



Kant-Skore Pistons are accurately ground to size by experienced workmen. This illustration shows one of a battery of grinders that are busy day and night turning out Kant-Skore Pistons.

What Kant-Skore Piston Service Means

A Product that is easy to sell—The car owner is quick to see the advantages of Kant-Skore Light-Weight Close Fitting Alloy Pistons. He appreciates the savings in oil, increased mileage per gallon of gasoline—a peppier and more powerful motor, and the silent flexibility of power that responds eagerly to every touch of the throttle. Every set you install works for you, bringing in more business. Kant-Skore Performance, and satisfied customer's word-of-mouth advertising and recommendations will soon build up a profitable business and a reputation for you as the man who gave them a practically new car at a fraction of what the trade-in loss would be.

Ready To Install—Kant-Skore Pistons are fully machined and ready to install, with the exception of the wrist pin hole, which is machined a few thousandths oversize to insure accurate wrist pin fitting.

Kant-Skore Pistons are accurately ground to size. Experience taught us that a machined piston leaves a surface the same as on a quick seating ring and wears off in quick time, increasing the clearance allowance by several thousandths of an inch.

How Proper Clearance Is Taken Care Of—To get the maximum motor efficiency, Kant-Skore Pistons must be installed at the proper clearance. The proper clearance is allowed for in the manufacture of all Kant-Skore Pistons. Simply tell us the micrometer measurement of the hole and we send you pistons of the correct size to allow the proper clearance. For instance, if you have reground a 3½ inch cylinder to .020 oversize, we send you the finished piston 3½ inch plus .020 oversize, less the Kant-Skore clearance. The finished piston will be stamped ".020". This insures a uniform clearance for the closest fit of any piston known to the automotive industry.

Prompt Deliveries—Large stocks of standard and oversize pistons are carried at the Factory, Kansas City Factory Branch, and by Distributors and Regrinders in all parts of the country for prompt delivery. On special oversizes up to .065, we are prepared to give 24 hour service at no extra charge. Write for the name of our nearest distributor.

Large Line—For all popular Cars, Trucks, Tractors and Motorcycles. Write for Price List and details of Kant-Score Proposition.

THE KANT-SKORE PISTON CO., CINCINNATI, OHIO.
Spring Grove, Garrard and Hopple Streets
Factory Branch: 1514 McGee St., Kansas City, Mo.

Kant-Skore
PISTONS
WEIGH LIGHTEST · FIT TIGHTEST

REGRINDERS—REPAIRMEN—DEALERS

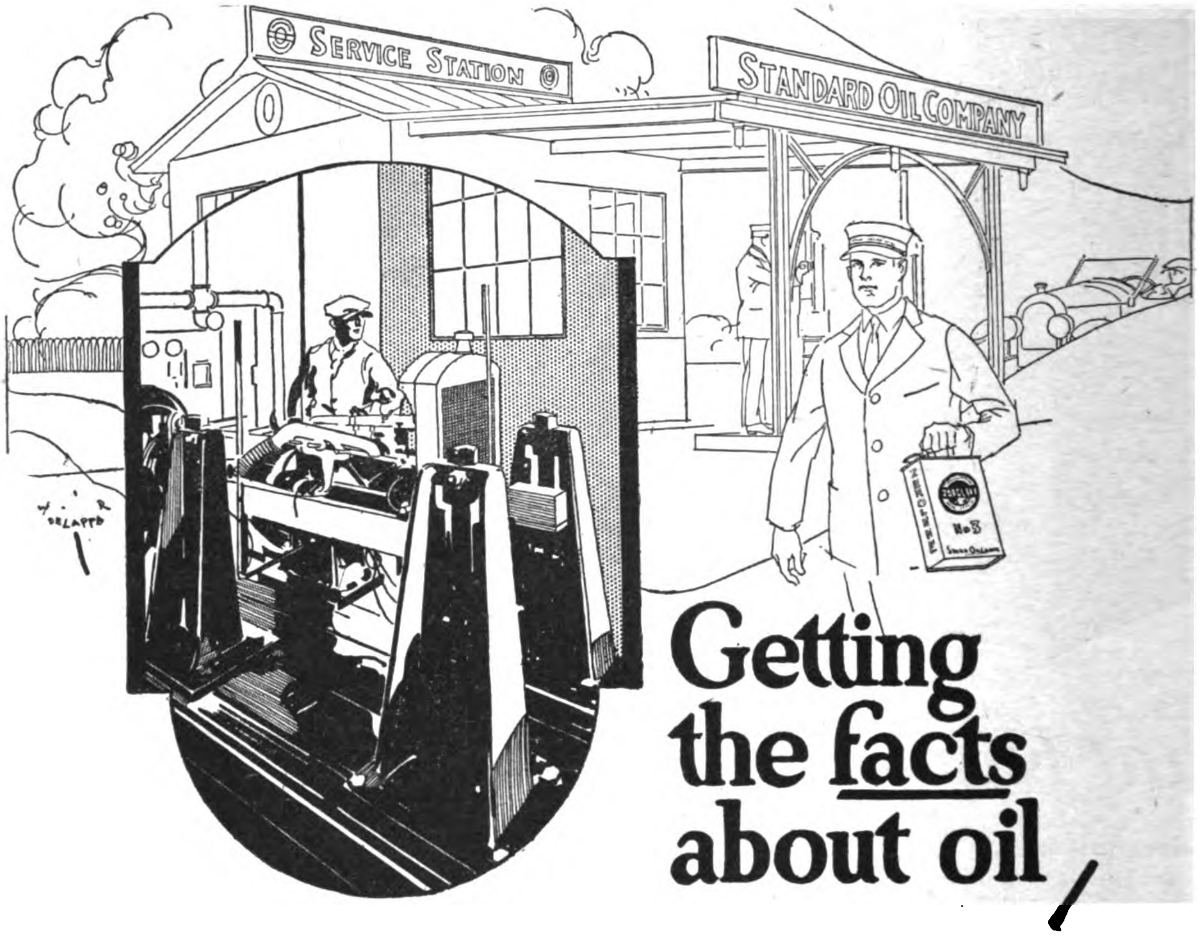
THE
KANT-SKORE
PISTON CO.
Spring Grove Ave.
CINCINNATI, Ohio
Please send me price list of pistons for Cars, Trucks, Tractors and Motorcycles. I am a
☐ Dealer ☐ Repairman
☐ Regrinder

Name........................

Street No..........................

City....................State..........

MW-9-15-22



Getting the facts about oil

All motor lubricants produced by this company are regularly subjected to rigid dynamometer, road and other tests.

The dynamometer laboratory contains testing apparatus which registers accurately every factor affecting the efficiency of a motor lubricant. It measures the power output of the engine, the fuel consumption, the oil consumption, the temperature of the motor, the quality of the exhaust gases. It enables us to determine accurately the lubricating efficiency of our own and other oils.

These scientific tests enable us to say without hesitation that Zerolene has, in the highest degree, all the essential qualities which characterize an ideal motor lubricant.

Board of Lubrication Engineers
STANDARD OIL COMPANY
(California)

The Standard Oil
ZEROLENE
For Motor Cars

more power & speed ~
less friction and wear ~
thru *Correct Lubrication*

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 11 SEPTEMBER 15, 1922 $3.00 PER YEAR

FABRICATED STEEL TO BE COAST-MADE

Huge Pacific Region Plants and Utah Coal and Iron Mines to Co-ordinate to Keep Millions at Home.

Years ago, the story goes, Eastern men to whom iron means bread and butter (and angel cake) bought a deep hole in Colorado, covered it with a lid, and covered the lid. They wanted the iron in that hole to stay put. If it came out their profits, due in part to nonproduction of pig iron and its progeny, and coke, in the Far West, would be many millions less. That's that.

And this is this: Pacific Steel Corp., headquarters San Francisco, has been formed. Capitalization, $20,000,000 preferred stock; and there will be 200,000 shares of no-par common. It is backed by banks in Seattle, San Francisco, Los Angeles and Salt Lake City. Large Utah iron and coal deposits have been acquired. Combinations and enlargement of important steel manufacturing plants are ahead.

Properties to be taken in are those of Milner Corp., in Utah, which has the mines; Pacific Coast Steel Co., which has plants in Seattle, Portland and San Francisco; the Los Angeles plant of Southern California Iron & Steel Co.; and others.

The purpose? Nothing less than to mine iron and coal right in the Pacific region, and to indulge in all the interesting processes leading to and including finished products (such as motor vehicle units) and "spending the difference" at home instead of into far-distant pockets.

Of motor vehicle body making facilities, the region already has some really notable examples.

Of practically every thing that makes up a motor vehicle—including the fastest engine in the world, except the special one Haugdahl is using—the Pacific region fast is becoming its own manufacturer. In fact, early this month a carload of Jahns pistons, made in Los Angeles, was sent to New Orleans.

All of which, it is news to say, is of interest to those who know what is meant by "getting in on the ground floor," or "climbing onto the band wagon."

Pacific Region Employment.

There is practically a labor shortage, agriculturally, in mining, logging, etc., in the Pacific region, Federal Reserve research shows. Factory employment is increasing fast, compared with 1921. The following figures showing workers on the payrolls of 40 selected firms, each usually employing 501 or more men on the dates stated, serve as an index:

		No. of Men on Payroll			
	No. of firms	Jly. 31, 1922	June 30, 1922	Jly. 31, 1921	See footnote
Los Angeles	16	27,272	26,250	23,452	16.2
Portland	8	6,645	7,811	6,189	7.3
San Francisco	10	7,092	7,067	6,460	9.4
Seattle	6	2,159	2,282	2,001	7.8
	40	43,168	43,410	38,102	13.2
San Francisco	10	7,092	7,067	6,460	9.4

The last column shows percentage of gains, July 31, 1922, over July 31, 1921.

To Remove "Death Gate."

The powers that be have ordered removal, off the roadway, of the one "death gate" on the outskirts of Burlingame, south of San Francisco, that has been the chief death dealer.

Right Hand Turns in Los Angeles.

On September 6 Los Angeles' city council voted to give a 90 day trial to the idea of a right hand turn at all times, irrespective of the line of traffic.

STRIKE ENDING—BE GLAD.

A strike is war. We all know what war is. Everybody who used railways during the strike knows how normal their service was—not. Progress of humans and all their commodities was set back seriously. The latest railroad strike is said to be solved, and everybody in his right mind must be glad of it.

PORTLAND LOOKING UP OCEAN SHIPPING

Research Induced by Rail Rates and Troubles Results in Water Route Seeming Very Advantageous.

Automobile distributors in Portland are considering the advantages of having cars shipped from the East by ocean and Panama Canal. Railroad rates into Oregon and the Pacific Northwest are higher on the carload minimum than into California, and Portland retail prices on passenger cars are said to be higher than perhaps at any other point in the United States.

Through Ralph J. Staehli, its secretary, the Automobile Dealers' Association of Portland has gathered data on shipment by water. It has decided that a substantial saving can be effected, which can be passed on to the consumer, with the final result of larger sales for all makes of cars. Before the opening of 1923 quite a number of dealers will try water transportation.

"There seems to be no prospect of freight reductions," states Mr. Staehli. "The railroad situation is altogether unfavorable because of strikes.

"Under the railway freight schedules the cost of cars, especially enclosed models, has been increased sometimes as much as 20 per cent. By shipping by water we believe this can be reduced as much as one-third."

Cars would be sent from Middle Western and Eastern factories to the Atlantic seaboard by rail or canal, thence via Panama Canal to the Pacific Coast. This takes considerably longer than by rail, but would not be so important during fall, winter and early spring. Distributors and a few small dealers may club together to obtain very advantageous water shipping rates. To meet the spring and early summer rush of orders most Portland distributors would probably resort to railroad shipments again.

RAJO-RIGGED FORD WINS HILL CLASSIC

Noel Bullock of Nebraska Transforms a "Bunch of Junk" Into Victor on Pike's Peak on Labor Day.

Noel Bullock, of North Platte, Neb., driving a Rajo valve-in-head Ford, won in his class in the Pike's Peak climb, Labor Day, September 4, winning $500 for that. He made the best time in any of the three classes—19:50.8—and so holds the Penrose cup for a year. Second man in each class received $200. Total purse was $2100.

Last year's best time was by King Rhiley, of Oshkosh, Neb., in a Hudson. It was 19:16.2. Record, 18:22.0, was made by Ralph Mulford, Hudson, in 1916.

Both Rhiley's and Mulford's cars were over 300 inch displacement. Bullock's was in the 183-in-or-less class.

Summary of the day's three events:

Class 1—(less than 183 cubic inches piston displacement)—Ford special (Noel E. Bullock), won, 19:50 4/5; Essex special (Glen Schultz), second, 20:41; Chevrolet special (Roy W. Beavers) 23:03 3/5; Essex special (Art Hillis), 23:05 3/5; Chevrolet special (Al Guthner), 32:14 2/5.

Class 2—(184 to 300 cubic inches displacement)—Wills Sainte Claire (Harold Brinker), won, 20:45 4/5; Dodge special (H. L. Chapin), second, 23:25 4/5; Dash's special (R. G. Dashbach), third, 23:37 2/5; Haynes special (Sam Marcus), 24:18 4/5; Stephens special (Harry O'Brien), 29:01 2/5.

Class 3—(over 300 cubic inches displacement)—Hudson special (King Rhiley), won, 20:05; Packard special (P. B. Abbott), second, 20:07; Mercer special W. S. Haines), 20:31; Broadmoor Yellow Devil (Harry McMillen), 23:11 1/5; Mercer special (Jerry Chambers), 25:29 4/5.

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There were 19 starters and 14 finishers. The men left at 5 minute intervals. E. S. Hopper, in a Re Vere, reached Glen Cove with a disabled engine. G. D. Adams also was out with engine trouble. The only accident was to Red Majors, of Colorado Springs. He was not hurt after overturning on a curve, but his Hudson was. Sherman Graves, Ford special, had a bad start and withdrew.

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Length of the course, which begins part way up, is 12 miles 2200 feet. Rise in elevation from start to finish is more than 4600 feet, the top being 13,000 feet above the sea. The men started in sunshine and finished in a shrieking storm of sleet and rain. Some were going at 60 per at the top, others were slowed, as toward the summit the surface was softer, owing to the storm.

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From the starting point at Crystal Creek the contestants roared past Glencove Inn and on to the timber line, past leafless trees, ghostly white from years of exposure; on to milepost 14. There they reached the hairpins, dangerous if "something happens," though ordinarily cars can run neck-and-neck, or pass, safely at any point.

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The start was delayed about 30 minutes so the police could clear the course. Motor cars, many of which began the ascent at dawn, dotted the mountainside. Nobody who was wise went up his his car to sleep on top of the world. It snowed up there the night before; and the world's big roof peaks are windy places—the writer found it so on Mount Baldy, in California, the other night.

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W. S. Haines, Mercer, in the large car contingent, class 3, was the first one to start, at 10:42 a. m. He reached the top third in time in his class. Glen Schultz, Ford, in the small car class, was the second starter; Harold Brinker, Wills Sainte Claire, in class 2, started third. Haines was first to reach the top.

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The Denver Post sponsored the event, the "fourth annual world's championship hill climb."

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Bruce A. Gustin, wiring his story from Colorado Springs, the day after the event, to the Denver Post, said: "Big league timber still grows in the 'sticks.' For instance: Noel E. Bullock, an amiable youth of North Platte, Neb., jogged up to Colorado Springs Saturday in a home brewed, innocuous-looking, gas-gargling contrivance which he had dubbed 'Ford special'. All the cars of the upper crust of the motor world honked scornfully at the little, unpainted 'bug' hopping along the highway. But—on Monday Bullock kangarooed up the cloud-cluttered Peak in—," etc.

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The Denver Post told interestingly of Bullock's sruprising victory being another case of history repeating itself. When the Pike's Peak climb was first staged in 1916 it was captured by a home-brewed Ford special known as the Romano. It had been built by Harry O'Brien and Rea Lentz and was driven by the latter.

Less than a month ago Bullock found a Ford radiator and a part of a hood in a junk pile. He decided to use them as the nucleus for a racing car. So he invested $50 in a motor block, picked up a set of wheels and a Ford frame. Day and night he worked and finally there appeared a vehicle which looked something like a cross between a kiddie kar and a toy automobile. It not only was the smallest and the shortest car on the hill, September 4, but it proved beyond argument that it was the most peppy.

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Bullock, it was said after the race, has a record of 31½ seconds on a half-mile dirt track, the world's record being 31 seconds. He is acclaimed by Brinker as one of the best speed pilots in the whole country.

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Bullock averaged approximately 38 miles an hour. He zipped off the first 3¼ miles in 3¼ minutes. Rhiley, Brinker and Abbott were clocked at 4 minutes each on the first 3¼ miles.

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E. E. Sommers of Denver refereed the climb. Tom Roberts of Denver represented the A. A. U. and Lee Carberry of Denver acted as assistant referee. There were no contests.

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Glen Schultz, who was second in the small car class, had a Rajo-equipped engine in his Ford, as did the winner of that class and every class. Glen won in the small car class last year.

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The $5000 Penrose cup, given by Spencer Penrose of Colorado Springs, is said to be the most valuable awarded for automobile competition.

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Brinker, who won in class 2, is a Denver man. King Rhiley, who won in class 3, for large cars, was the cup winner last year.

Many Motor to Yellowstone.

Favorable weather and road conditions kept tourist travel to Yellowstone Park at the peak all through August. Superintendent Horace M. Albright says the total number of visitors for the season up to September 1 was 89,667, or 14,700 more than at the same date last year. Visitors in August alone totaled 38,097. Of these 12,317 went by rail and 25,780 by automobile. The number of automobiles entering the park in August was 7265.

Present indications, in the absence of early snows or other unseasonal signs of approaching winter are that tourists to the park will total 100,000 mark before the season closes, September 20. In 1921—the heaviest travel year in the park's history—81,651 visitors entered Yellowstone.

Why Pick on Pickford?

One news item is that the other day complaint was issued in Los Angeles against Jack Pickford, brother of Mary, for "allowing" his headlights to glare. Another item, worthy of scarehead prominence, is that every hour, every night, many thousands of others are just as indulgent to their lights.

SOME TRACK, HAS SAN LUIS OBISPO

Dirt Records for One, Fifteen, Twenty and Fifty Miles in 183 Inch Class Broken Before a Record Crowd.

On the fast $50,000 one mile dirt track at San Luis Obispo, Labor Day, September 4, John Holmes, in a Ford special, won the 50 mile final in 40 minutes 47 seconds, said to be dirt track record. His mile average, 48.9 seconds, indicates how fast the track is. Compare it with Sig. Haugdahl's world record, 43.6, on the circular mile state fair grounds track in St. Paul, Minn., September 6, Haugdahl's specially built car is said to be the fastest in existence.

In the final fifty, at San Luis Obispo, J. D. Morris, Whippet, was second; Ed Cochran, Ford special, third; Jess Coe, Ford special, fourth. The prizes were $500, $300, $150, $100.

For the 10 mile preliminaries there was a prize division of $100, $75 and $50.

Ed. Meyers, of Redlands, in his Redlands special Ford, won the first preliminary. F. Lyons, Miller special, was second; Ed Cochran, Ford special, third; J. D. Morris, Whippet, fourth. Time, 8:18.

The second preliminary was won by F. Lewelling, Ford special; J. Holmes, Ford special, second; Waycott, Ramon special, third; Jess Coe, Ford special, fourth. Time, 8:05.

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Meyer, who won the first preliminary, looked like the benevolent assimilator of the first prize of $500 in the final, but in the 47th lap, when leading, his special axle broke. His Rajo valve-in-head car certainly is fast. He covered one mile in 44 seconds flat—world record at that time—Haugdahl's 43.60 was done in St. Paul two days later. Meyer's car did some more 183 cubic inch record work—15 miles in 12 minutes, 25 miles in 20 minutes.

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According to the A. A. A. official record list the times made at this meet were extremely creditable. Compare them even with the nonstock figures for one mile circular dirt tracks, by Barney Oldfield, driving an Oldfield special, in St. Louis, Mo. August 9, 1917. Barney made records up to 50 miles. He did the mile in 45 seconds; 10 miles in 7:56.20; 15 miles in 12 minutes; 20 miles in 15:52.20; 25 miles in 19:57.60; 50 miles in 40:47.00. Barney's car had a large engine.

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Lewelling, who won the second preliminary and $100, was forced out of the final by hard luck. He and Holmes, who was second in the second preliminary, were forced to puff some by Fred Fame, Ford special, till Fame's car developed lung trouble.

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Holmes, winner of the final, never had been in a regular race before—but then, he had been well schooled in forging to the front regardless, if he used the opportunities of the schooling. He used to drive a Pickwick stage. Credit where due, however—Holmes used his head more than his accelerator, in this race.

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The entry list was large, including 11 Fords; and there was a record attendance—grandstand chock full of those who paid, and the neighboring hills dotted plentifully with longsighted money savers.

AUGUST.

Despite the rail and coal strikes the business activity in this district continued to increase in July. Bank debits in 20 principal cities were 12 per cent greater than in July, 1921; by far the largest increase in any month of this year compared with the same month a year ago. Retail sales of 32 representative department stores were 3.1 per cent greater in value than in July, 1921—the third consecutive month during which such an increase has been noted. Although wholesale dealers in 10 lines of business report generally that retailers are still buying to meet current needs only, nevertheless the value of sales in 9 of the 10 lines was greater in July, 1922, than in the same month last year. Compared with a year ago, employment conditions are completely reversed. In July, 1921, unemployment throughout the district was general; today reports of labor shortage are not uncommon.—Federal Reserve, Twelfth District.

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Some dust on the track, naturally. Also some on the dusty walk from the entrance to the grandstand. Some reserved seat aristrocrats thought the P. C. railway should have delivered them nearer the stand.

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Fortunately the accident in practice, the day before the race, was not fatal. E. A. Winfield's driver ran into the rail, lost a couple of teeth and disfigured his nose. The car overturned. The track has 30 degree banking on the turns.

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The racing was under A. A. A. sanction. The officials were: Referee, H. C. Saunders; judges, Judge T. A. Norton, A. Luchessa, N. Ricciardi, C. P. Kaetzel; chief timer, C. J. Weir; starter, R. R. Long; umpires, B. E. Patnoe, J. A. Renetzky, W. T. Reid.

Exit Tacoma Speedway.

Dismantlement of the speedway at Tacoma, Wash., has begun, marking the exit from racing annals of a track which for 11 years has seen some of the country's fastest speed contests. The track has been in receiver's hands several months and creditors have been increasingly insistent. Part of it will be sold as used lumber. The receiver recently advertised for sale the equity to the lands and improvements, but attracted no bidders. Total investment in the track was about $150,000; it was too big for any other kind of speed than automobile racing; and good seasons frequently were followed by lean ones which consumed all profits made by the former management under Walter C. Baldwin. Last year a costly fire burned down part of the grandstands, and they had to be replaced at great expense.

Ten L. A. Motors in L. A. Race.

If Harry Miller, Los Angeles straight-eight motor wizard, can finish four more motors in time, it is expected ten of them will compete in the Thanksgiving Day race in Los Angeles. Six will compete September 16 in the opening meet of the Kansas City track. Their pilots—Murphy, Milton, Elliott, Hill, Hartz, Sarles. Hartz' motor was completed late in August. Sarles' is the one in the Durant special Milton used last season. The four unfinished are for Cliff Durant. It is said Hearne probably will pilot one; Sarles another, perhaps; and that Mulford and Resta are possibilities.

Harry Miller says he no longer has any connection with nor investment in Leach-Biltwell Motor Car Co. His plant, named Miller Engine & Foundry Works, is at 2652 Long Beach Ave., Los Angeles.

Fine Fresno Race Assured.

Fresno's 150 mile race, September 30, last day of the big fair, is sure to be contested by a field of crackerjacks, and to be well officered. L. A. Nares, of Fresno, will be referee as well as A. A. A. representative. Fred J. Wagner will start 'em, and all that that little term means. Wagner's electric timer, invented by C. H. Warner, will be in charge of the inventor. S. O. Walker, of Visalia, and other able dissectors of distances, will judge.

The night before, all representatives of the A. A. A. contest board in California, consisting of 5 delegates and all speedway managers (4), will meet to discuss racing matters.

Be contented, but not a dead one.

REO HITS FAMOUS RECORD SEVERELY

Veteran Nicks 2 Hours 58 Minutes Off Best Previous Time from Los Angeles to Phoenix and Back.

On August 27, about 4 a. m., a Reo rolled out of Los Angeles, reaching Phoenix, Ariz., 420 miles, about 7 p. m. Next day it left Phoenix about 4 a. m. and reached Los Angeles, 537 miles by a longer route, about 11:35 p. m.

Its elapsed time (not including the night stopover in Phoenix) for the round trip, 957 miles, was 34 hours 48 minutes, beating the Nash record, made a year ago, by 2 hours 58 minutes.

The Reo's one-way time to Phoenix beat the best time ever made in a Los Angeles-to-Phoenix road race, that of Harvey Herrick, in a Kissel Four, in 1910. The one-way record, however, 12 hours 16 minutes (not in a race), was made about a year ago by a Lincoln.

The Los Angeles-to-Phoenix Road Race, fittingly called the Desert Classic, which attracted nationwide attention during the 7 years it was held, was considered by automobile experts as probably the most severe test to which a motor car could be subjected. The stripped racing cars which competed had gasoline lines taped, extra spring supports, double cushions, shock absorbers, etc. They needed them!

Today much of the route still lies across desert sand and rough rock roads, over mountain passes, and through waterless stretches where a sudden windstorm may eliminate all sign of wheel tracks, leaving the motorist at a loss as to just where to point his radiator. Sudden cloudbursts may fill the numerous cross washes bank full within a few moments, leaving sheer drops on either side to plunge into and climb from, perhaps with the loss of the tire carrier as the rear end drops down the several feet of vertical wall to the bed of the erstwhile stream.

The Reo that mastered these conditions late last month was a six cylinder touring car, strictly stock in every particular except for Hartford shock absorbers and Brown reflectors. It was driven by Charles H. Bigelow, with Dave Fasset, service manager of the Reo branch in Los Angeles as relief driver, and H. H. McGillis, a Los Angeles newspaper man, as observer.

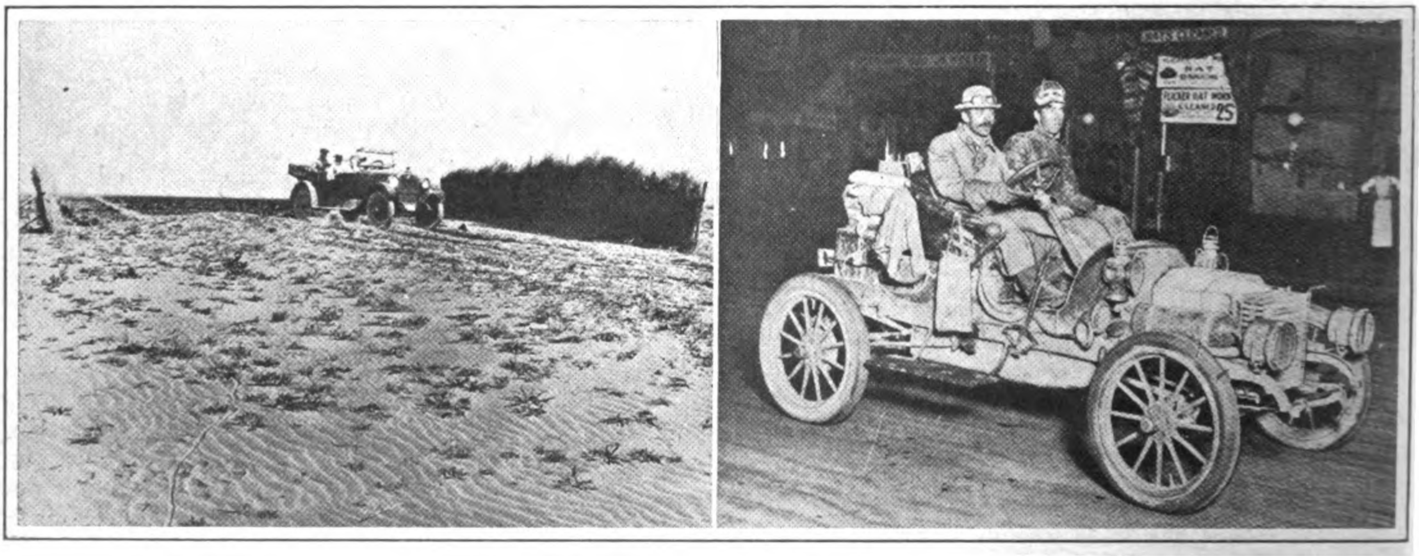
Bigelow, who had laid out the original Los Angeles-to-Phoenix race course 14 years ago with a 2 cylinder Reo, was thoroughly familiar with the route and driving conditions. For many years he has built roads and highways as an engineer, and has competed in many road races, including five of the Los Angeles-to-Phoenix events, in addition to having made the first transcontinental trip by automobile and the first round trip between Los Angeles and Phoenix, the latter having been made during his reconnaissance for the first Phoenix race. Fasset also has had transcontinental road driving experience, and is an automotive expert of national reputation. He has been in the Reo factory many years as a specialist.

On the outward trip a severe sand storm was encountered in Coachella Valley, the sharp particles of sand cutting deep into the hands and faces of the speeding Reo crew as they dashed toward Mecca. Twenty miles east of that point the first cloudburst of the trip was experienced. For a few minutes the Reo ran through pouring rain, with heavy lightning. A quarter of a mile from the car one bolt struck in the middle of a dry lake, throwing up the earth nearly a hundred feet.

Returning from Phoenix far ahead of schedule, the Reo met the heaviest cloudburst of the trip. The party was through the actual rain within a few minutes, but for 20 miles the route lay through a series of miniature lakes. Bigelow, Fassett and McGillis were wet to the skin and the floor of the car was covered with water.

The round trip mileage logged a total of 957 miles, with 420 miles as the distance on the outward bound trip by way of San Bernardino, Redlands, Beaumont, Banning, Mecca, Blythe, Vicksburg, Salome, Palo Verde, Buckeye and Phoenix. Returning, the route was through Vicksburg, Parker, Needles, Amboy, Ludlow, Barstow, Victorville, San Bernardino and Los Angeles—537 miles.

The entire round trip was covered without the slightest trouble of any kind save a single tire change when a puncture stopped the run for 6 minutes on a detour between Cabazon and Palm Springs. The original Silvertown Cords are still on the car, on display at the salesrooms of the Los Angeles Reo factory branch. The rims of the disc wheels, dented and marred by rocks and chuck holes, show the terrific punishment they received.



REO THAT WRECKED LOS ANGELES-TO-PHOENIX-AND-BACK RECORD, AND REO THAT ROUTED DESERT CLASSIC.

At left in the picture is the Reo Six that broke the Los Angeles-to-Phoenix-and-return record the other day. It is shown crossing the sand spit between Desert Center and Blythe, on the route which its driver, C. H. Bigelow, located for the first Los Angeles-to-Phoenix race, run in September, 1908. At the right are shown Bigelow and Oliver Creach, after their return to Los Angeles in the 2 cylinder 1907 Reo in which that routing was done. In the view at the left, note the brush sand break in the sand spit mentioned, which is about midway between Blythe and Mecca, the latter being about 40 miles west of Blythe. This sand spit, affecting about 200 yards of the road, is being used as a strong factor in arguments to Arizona people, who are to vote in November on raising $2,500,000 by bonds for a state highway cutoff from Buckeye, on the Phoenix-Yuma route, to Ehrenburg, Ariz., on Colorado River, opposite Blythe. It is claimed that in both Arizona and California this new route between Phoenix and Los Angeles would be superior to the southerly one via Yuma and Holtville, between which points are 6 miles of apparently uncontrollable sand dunes. This little sand spit on the other route is compared with this.

SPOKANE PLEASED AT SHOW RESULTS

Exhibits as Part of Inland Empire's Autumn Fair Deemed More Effective than at Other Seasons.

The annual automobile show held in Spokane, September 4-9, in connection with the Spokane Interstate Fair, was characterized by generous participation of automotive trade men in the big idea, which was to give the people of the Inland Empire, in Northern Idaho as well as in Washington, the biggest kind of a run for their money, educatively and in entertainment.

To say the automobile exhibits predominated would be neither true nor, if true, fair. Each for all, all for each—that was the plan, and it went over big. Every factor realized that its best interests are involved with those of every other. Prosperity in livestock raising is appreciated so widely in that region that the exhibit from the Washington state herd of cattle at Steilacoom was a stellar feature; so important that Governor Hart has accompanied the herd to all fairs in his state. Livestock entries set a record not likely to be surpassed in years.

Competitive entries of all kinds were so numerous as to strain the premium purse. Not a direct profit, but a deficit, in the fair's financing was expected and caused no groans. The fair cost more than $100,000.

Horse racing every day; mule relay races; automobile obstacle races—the people wanted plenty of entertainment and got it. Installing an industrial annex down the midway appeared to be necessary, to catch them on their way from one pleasure to another.

Yet the automotive market did a good business. The dealers found this autumn exposition better than winter or spring shows—it brought in many people who at other times would stay at home, for climatic and other reasons. B. J. Garnet managed the automobile show.

Perfect weather prevailed. Average attendance beat that of 1921 by nearly 25,000 per day, the first five days.

Oldsmobile in Inland Empire.

Transport Motor Co., Spokane, has taken distribution of Oldsmobile cars and trucks in the Inland Empire territory. This represents a change from the previous policy, followed for two years, of supplying Spokane from a Seattle branch, states F. J. Miner, representative for Olds Motor Works, Lansing, Mich., who made the new appointment. Transport Motor Co., headed by August Johnson, general manager, and J. B. Loper, sales manager, also handles Velie and Columbia cars for Washington east of the Cascades. Oldsmobile Motor Co. of Washington, formerly with sales houses at both Seattle and Spokane, gives up the latter, but retains control in Western Washington on Oldsmobile sales.

New Los Angeles Truck Deal.

August 23, Los Angeles' city council divided among Garford, General Motors and Moreland orders for 60 motor trucks, totaling $207,831.17. The city attorney called this illegal in several respects. It was a purchase on a 3 year basis, he said, while the original request for bids provided for lease, with option to buy. Also, he said, it was illegal because contract did not go to the lowest bidder—none of the three companies was lowest. If it had been intended to buy, not to lease, he intimated, the original call should have so stated, thus permitting bids by companies not in position to consider the leasing plan stated in the call. And so on.

THE COAL SHORTAGE.

The coal shortage throughout the United States today has not come about naturally, it has been brought about artificially by the Wall Street interests that own the railroads and the coal mines for the sole purpose of getting a higher price for their coal. Preparatory to selling coal at robbers' prices, they are now making it impossible to get coal. We have to shut down. There is no way of telling now when we will resume, but I can tell you one thing—it won't be before we can get all we need at an honest price.—Henry Ford.

The city attorney has been told to change the deal to a 3 year lease, with option to buy. That may, or may not suit the three companies named, or eliminated bidders may charge illegality.

Predictions are that leasing, and operating with city employes, will be as far as the enterprise will go—no purchase eventually; and truck men who have been renting trucks and their services to the city say the city will not save by the change.

The Weather.

Even San Francisco has had a few warm days, and the nights in Los Angeles have been "unusual"—really summery. It has not kept folks in the warmer back country from motoring to the seashore, however; and it has not been anything like the heat back East. So nobody's kicking. Normally, September is Los Angeles' warm month, anyhow.

Salt Lake Trade News.

Retirement of L. O. Naylor from the firm of T. W. & L. O. Naylor, Studebaker agency, was an outstanding event in the automobile trade in Salt Lake City during late August. The company has been reincorporated as T. W. Naylor Co., retaining the Studebaker. T. W. Naylor now is president; Chester N. Weaver, well known Studebaker distributor, of San Francisco, is vice president; Leo P. Grunbaum, president of Merchants Security Co., San Francisco, is treasurer; John B. Burnham, secretary; and Fred Tadje, assistant secretary. With new capital a more aggressive sales campaign than ever before will be made throughout the agency's territory, which includes Utah, Idaho, Southeast Oregon, Eastern Nevada and Western Wyoming.

Intermountain Motor Car Co., Durant and Star distributor in Utah and Idaho, reports it has already booked many order for the new Star although the first cars will not emerge from the Oakland, Calif., plant before September 15.

Covey-Ballard Motor Co., Ford and Lincoln dealer, sold 75 new and 46 used cars during August, said to be the highest August mark ever reached by any Intermountain dealer. The previous record for the month was 53 Ford sales.

Mendenhall Auto Parts Co., 36 South West Temple St., Salt Lake City, distributor of automotive parts throughout the Intermountain region, has added a complete stock of Timken axle parts, and of Timken bearings for the front and rear axles of trucks equipped with Timken axles. Its earlier lines are Continental Red Seal engines, Borg & Beck clutches, Bock bearings, Aetna thrust bearings, Standard ball bearings, and Shafer roller bearings.

First Gray Car Reaches Coast.

Carrying a message from Mayor Couzens, of Detroit, to Mayor Rolph, of San Francisco, Capt. A. B. Walton, official representative of American Automobile Association, arrived in San Francisco September 12 with Leon De Clark, tester for Gray Motor Co., Detroit, in a stock Gray car. They plan to start almost immediately on an economy run from San Francisco to New York by the southern route, during which Captain Walton will check the gasoline mileage.

Mr. De Clark confirmed the report that Gray Motor Co. soon will send representatives to investigate possibilities around San Francisco for establishing a Coast assembling plant. Sixty cars per day are being made in Detroit, and output will be 200 a day when the plant there is completed, about December 1.

SACRAMENTO SHOW ALMOST NATIONAL

Among Motoring Tourists Alone, Twenty-Six States of Union Represented at Great California Fair.

Sacramento, capital of California and metropolis of Superior California, was the scene of the state fair, September 2-10; and the automobile show held in a huge tent, and managed by Royal Miller, was declared in Sacramento to be "the biggest automobile show ever held in the Golden State."

Quite possibly true. There were 1923 models galore—months ahead of the so-called national shows, in that respect, was this exposition. The various points of the various cars and, notably, the fact that collectively they presented a near-riot of color as compared with those of yesteryear, were noted not only by the people of Northern California, but visitors from all parts of the United States got their first view of the 1923 offerings at Sacramento.

Among them were many touring motorists. It was estimated that the 230 automobile parties registered at the municipal camp ground during seven days of the fair comprised about 1300 campers, and they represented 26 different states — Washington, Oregon, California, Idaho, Wyoming, Utah, Nevada, Arizona, Montana, South Dakota, Colorado, Texas, Kansas, Oklahoma, Arkansas, Missouri, Iowa, Minnesota, Nebraska, Illinois, Michigan, Ohio, New York, Connecticut, Massachusetts and Vermont.

In respect to attendance, the automobile show at Sacramento may fairly be said to have been national. Many trade men were there, too.

Farmers flocked there, of course. Motor cars are interesting them more now than for some time past; and for them, also, there was a splendid power-on-the-farm section; an almost bewildering variety of tractors and things indicating their wide range of usefulness. Especially pleasing was the evidence that manufacturers in this line are paying close attention to the need of products designed and constructed to fit the peculiar requirements of various parts of the Pacific region. Some makers of motor cars, and of the things that "go with" them, could note that with advantage.

L. A. Has Wider-Street Fever.

When Baltimore's business district burned, some years ago, and was rebuilt, a number of streets were made wider. Los Angeles, in which many streets are too narrow for the extraordinary motor traffic, probably will not wait for a fire.

ON COLUMBIA RIVER HIGHWAY, ONE OF THE COUNTRY'S LONGEST PAVED ROADS. Many Portland motorists take as a week-end jaunt the one to historic Astoria and Seaside, on the lower Columbia River Highway, now adequately bitulithic-paved the whole 125 miles from Portland to the sea except about 5 miles, and 3 miles of that is single track pavement. Completion of the lower portion, and the additional work done on the upper road, gives Oregon one of the longest paved roads in the United States, and one declared by world travelers to surpass any in Europe, in beauty. The picture was taken at Shepperd's Dell, by Winter Photo Co., Portland.

A Remarkable Los Angeles Dealer.

Robert P. Fite, whose remarkable mission-style Ford agency and service station in Inglewood, Calif., was pictured in Motor West, as was pictorial proof of his hunting ability as displayed in Lower California, graduated from small-town limitations some time back. He took the Chevrolet distribution in Los Angeles, opened a large establishment and has been going great guns ever since. He is well ahead of his present contract to sell $5,000,000 worth of "Chevs" within a year from August 1, 1922.

The Los Angeles Chevrolet Dealers' Association has grown up since Mr. Fite became an Angeleno. Recently it entertained in Hollywood Bowl, its honor guest being the economy Chevrolet which the body had sent to New York and back twice, and which had covered 8245 miles at 23 miles per gallon of gas 1120 miles per gallon of oil.

Mr. Fite, who advertises himself as a "dealer in courtesy, service and Chevrolet automobiles," is organizing a huge Chevrolet owners' picnic, to be held at Arrowhead Lake, September 23-24. More than 500 are expected to participate.

L. A. and Chicago Divide "Honors".

At the 11th annual congress of the National Safety Council, in Detroit, August 28-30, insurance figures told that one-sixth of the accidental deaths in 1921 in this country were "automobile" deaths, 35 persons per day being "sacrificed to the gods of speed and chance taking", the total being 13,000, exceeding 1920 about 3½ per cent. Total deaths from all traffic causes in 50 cities were 4.8 per cent less than in 1920. Steam and electric systems each had about 23.5 per cent less than in 1920.

Los Angeles "led" all other cities in percentage of population killed—291 persons in each million.

Los Angeles, with 327 cars per 1000 population, "led" in 1921 in having nearly 3 persons (2.9) in each 10,000 die from automobile accidents. Chicago, with 60 cars per 1000 population, "led" with 3.21 automobile deaths for each 10,000 cars.

Republic Ball Team in Bay City.

George E. Clarke, branch manager of San Francisco branch of Republic Truck Sales Corp., has capitalized the public's love for baseball—by organizing a team representing his branch and entering it in one of the city leagues. Mr. Clarke has supplied natty uniforms, with the Republic shield trade mark across the breasts. The team has a mascot 'n' everything.

MANY THOUSANDS AT MODESTO SHOW

A Rich Treat at Nominal Price of Ten Cents, After Lapse of Five Years, Is Appreciated by Multitude.

A hospitable inland empire—the great San Joaquin Valley, the big, warm heart of California.

One of the most hospitable cities in it—Modesto; a city in which, on soft summer evenings, people go about hatless, just enjoying life "as is" and what's more, helping others do so also.

That spirit was one reason why the price of enjoying everything there was to see and hear, and much in the way of samples, "literature" and so forth, given away in the Stanislaus County Exposition and Automobile Show, September 9-16, was only 10 cents.

Four thousand persons crowded the mammoth tent the opening night. From far and near they swarmed. Hundreds of motor cars were in the municipal automobile park—a full city block—long before 7 p. m., the opening hour, on the first day. No doubt at least 4000 attended every night. That would make the total for the period of the show 32,000.

There were more than 100 exhibits. The range of motor vehicles was very satisfying. So were the exhibits by many of Modesto's merchants. The style revues, in both men's and women's clothes were displayed on the runway, by models who ordinarily wear skirts, were enlivening and enlightening. The entire entertainment program was unusual and worth many times the admission price.

That the show will prove profitable is obvious, by the earlier reports. At this writing the show still is on. It ends tomorrow.

H. Elmo La Breque, the manager, is thorough. What he provided as to design, arrangement, coloring, lighting, and musical and other features, had such quality, and co-ordinated with such pleasing precision, that after he introduced Mayor George J. Ulrich, promptly at 8 p. m. on the first night, the mayor praised him highly. So did Frank Paradis, president of Stanislaus County Automobile Trade Association, under the auspices of which the show was held.

The affair was given plentiful publicity; and on the first day the Modesto Evening News had a fine 12 page automobile section. Both the News and the Morning Herald had exhibition booths, and the latter transmitted in the tent, through the magnavox, a daily radio concert.

Tuesday night was high jinks night for 200 or more members of the Stanislaus County Automobile Trade Association. After the show they and their wives and invited guests—all exhibitors were given tickets bought by members—assembled at long tables in the tent. Some talks—one by "Bob" Martland, secretary of the state body, of which the county association is a part. And s-o-m-e program; mirthful songs and skits, arranged by Manager La Breque.

The exhibits—to enumerate them would be the usual, boresome thing. Some more curiosity-exciting than others, naturally. One, the cut-open Buick chassis, insured for $15,000 is said to have cost considerably more. Another, the Doble car, was driven up from Los Angeles, giving demonstrations on the way, such as a race with a motorcycle officer in Oxnard, who was given a good start but overtaken quickly at 75 per. Another—accidental—was just north of Bakersfield. Loose sand on the cement highway made the car skid, bend its front axle and break a telegraph pole. Abner Doble, president of Doble Steam Motors and inventor of the car, was in it. Al Jansen drove. A Modesto broker claims more than 100 Stanislaus County residents have bought Doble stock.

MUTUAL SERVICE PAYS.

The money and labor war goes 'way back. It started when the poor were slaves—legally and literally slaves—and some "radical" spirit worked out the idea that all men should be free. It continued through the days when men were forced to bend their necks to the yoke 14, 16, 18 hours a day, for barely enough to keep body and soul together in squalor. It is going on right now, whenever and wherever capital can reduce the amount it pays labor, or labor feels it can force a higher wage. There have been abuses on both sides The remedy for it all is a conviction of the merits of mutual service.—L. A. Record.

Some historical mementoes were show features—a photograph of the first automobile road race run in California, in 1902, from San Mateo to Crystal Springs Dam; the cup presented to Chester N. Weaver Co. for sending the first car into Yosemite in 1916; and so on.

It seems safe to predict that Modesto will not let another 5 year lapse follow this show. The last one was in 1917.

Today's candidate for the Poison Ivy Club is the happy picnicker who borrows your penknife to open a can of pineapple.—L. A. Record.

A glaring fact—that most Los Angeles headlights glare.

Goodrich Coast District Change.

Motor West told, August 15, that W. T. Powell and F. R. Carroll had gone to Goodrich headquarters in Akron. Mr. Powell was in charge of the Pacific Coast district, with headquarters at the San Francisco branch. Mr. Carroll was manager of the Los Angeles branch, under the former's supervision.

The new news is of a new Goodrich-Diamond Rubber district, one of 13 in the whole country, with Mr. Carroll as manager, with headquarters in Los Angeles and his field comprising California south of the Tehachapi Range, and Arizona. Also, he continues as export manager for the Far East, directing the business of Yokohama Rubber Mfg. Co., Goodrich's Japanese branch. L. E. Bollan is made operating district manager in Los Angeles; Harry W. Zelliff, Goodrich mechanical rubber sales manager; V. A. Martin, Diamond tire and mechanical rubber sales manager; and Frank J. Schweitzer, Goodrich truck tire sales manager.

Mr. Carroll managed the Los Angeles branch when it was opened, in 1911. In 1917 he was made San Francisco branch manager. Later he was sent to Yokohama as vice president and director of Yokohama Rubber Mfg. Co., and given supervision over other Goodrich interests in the Orient. In November, 1921, though retaining the Yokohama connection, he resumed charge of the Los Angeles branch.

Mr. Powell took charge in San Francisco in March, 1921, as district manager, with supervision of Goodrich and Diamond Rubber sales in California, Nevada, Utah, Arizona and parts of New Mexico. He had been San Francisco branch manager two years and previously had charge of the Diamond Rubber Co. line, controlled by Goodrich. Before that he was in the rubber industry on the Coast many years.

Two New Coast Tires.

Coast Tire & Rubber Co., Oakland, has added two new lines, both for small cars. They are Scout 49, a clincher fabric type, and Coast Ranger, a cord tire in both clincher and straight-side types. The factory is several thousand tires behind orders on these new types alone.

Jurgewitz Is Jack Tire Manager.

Jack Tire & Rubber Co., Spokane, has made H. C. Jurgewitz manager. He has been Diamond Rubber branch manager in Spokane the past year, and before that was Goodyear branch manager in the same city for 10 years.

PAGEANT REVEALS PROMOTER'S NERVE

Cupidity and Side Shows Hinder Value of Los Angeles Exposition and the Exhibitors Set Up a Howl.

Covering 35 acres, and made up of nearly 700 booths, exhibiting about $2,000,000 worth of manufactured products and compelling a 7 mile promenade upon the part of the really thoroughgoing visitor, the California Pageant of Progress, held at Exposition Park, Los Angeles, August 26-September 9, was announced as, and probably was, the largest exposition of the kind ever seen west of the Mississippi.

However, the feeling of pride and wonder at the manifestation of Southern California's industrial position which it gave, was counteracted, perhaps nullified, by the outspoken dissatisfaction of exhibitors with the manner in which the industrial exposition was lost in the glamor of the "side shows."

The plan of the Los Angeles Chamber of Commerce, under whose auspices it was staged, was that it was to be a repetition of the very successful business show of last year, held in an immense concrete building of several stories near the city's retail and wholesale center, and free to daily and nightly multitudes of interested sightseers. During that show, apart from the usual evening crowds, every line of business represented succeeded in attracting scores of buyers from all parts of California and the Pacific Southwest.

This year, exhibits were congregated under the open sky; also, for several days, under an August sun that made lingering in the shade preferable to walking about. A substantial entrance price did not stimulate attendance. There was a business atmosphere, but it was subordinated to an overwhelming series of "entertainment" features, interesting as far as they went, but certainly not benefiting business exhibitors insofar as they drew a large proportion of the public behind fenced-in enclosures, at stiff admission prices.

Behind all this was the fact that the Pageant was managed by a promoter of a kind that, it apparently was demonstrated amply, is the wrong kind to use in handling a solid, commercial institution such as the Los Angeles exposition was intended to be.

There were attempts to put into practice many of the large and small artifices whereby a roaming circus makes its travels profitable. The disfavor of city councilmen and the firmness of Chamber of Commerce committeemen balked a number of these, but the situation developed a terrible howl, especially from exhibitors. Tickets and passes for in-and-out business trips of exhibitors were doled out with poor grace and on niggardly scale. The promoter-manager, assured of a fixed compensation of a hugeness that caused much comment, showed great ingenuity in persistent efforts to further increase it. This became positively humorous. One member of the city council was moved to put a sign on the city hall, announcing that it was "not to be sold by John C. Berger"—the promoter.

Warm weather interfered somewhat with late morning and afternoon attendance. As evening shadows fell, the "entertainment" features launched into action—Chateau Thierry, a mimic, thunderous affair, invisible behind effective walls, in which thousands of pounds of powder were consumed daily in din and smoke; diving girls; show girls; choruses; high distance "dry diving" into nets. Exhibitors sat or stood in solitude at times during the busiest hours.

The thing showed the point which Southern California industrial manufacturing has reached, yet it benefited exhibitors but little in a business-publicity way. The illumination was a tremendously elaborate affair, bathing the "streets" in strong light; the booths, colorfully decorated, stretched beyond range of the eye; there was a constant multitude at the entering point, where ticket collecting facilities were reminiscent of cruder days than these; but there was, and is, a general opinion among those whose products were represented that next year's "pageant"—if it answers to that description—will have to be under policies radically different.

The exposition was to be a non-profit institution. It was that—for the exhibitors, for the community, and for the Los Angeles Chamber of Commerce.

Manufacturers and distributors of automotive accessories were well represented, reinforced by a few distributors of passenger cars and motor trucks. They "drew" perhaps more heavily than any other class, and while direct business was small, the fact of being represented had its value. Largest was the Ford car, Ford truck, Fordson tractor, trailer and farm implement showing of Ford Motor Co., filling a large tent, and which was the strong point of attraction for the agricultural element among the visitors.

Remarkable among automobile exhibits at this exposition was a joint one by Robert P. Fite, Inc., and Bannon & McGuire—a painted scene depicting the snow and ice wonders of Arrowhead Lake, in the San Bernardino Mountains and of such huge dimensions that two Chevrolet cars, shown in the picture's foreground, carrying passengers into camp, did not seem oversize in the composition.

Prominent among the long list of automotive exhibtors were the following: Clark-Turner Piston Co.; Goodyear Tire & Rubber Co.; Joy & Allard; W. H. Jahns; Auto Gear Co.; E. B. Lacer; Henry Lansdale; Dan B. Miner Advertising Service; Moreland Motor Truck Co.; United States Spring Co.; Western Auto Supply Co.; Standard Oil Co.; E. M. Smith Co.; Smith-Booth-Usher Co.; Pulliam & Pulliam; Marvel Carburetor Sales Co.; Sunset Mfg. Co.; Keystone Iron & Steel Co.; Bailey-Fitwell Co.; W. S. Rush & Co.; J. S. Bushey & Co.; Union Oil Co.; Automobile Chamber of Commerce (private concern); Boyle-Dayton Co.; Boyle Mfg. Co.; Brunswick-Balke-Collender Co.; Eccles & Smith; Ford Motor Co.; Harry W. Harrison, Inc.; Kay-Bee Mfg. Co.; M. & H. Novelty Co.; Motor Car Dealers' Association of Los Angeles; New York Lubricating Oil Co.; No-Dim Windshield Mfg. Co.; W. O. Thompson Mfg. Co.; Vandenbraak & Litterer; Ventura Refining Co.; Western Auto Electric Co.

Jobs Offered by Doble.

W. A. Doble, Jr., general manager of Doble Steam Motors, San Francisco, writes Motor West that seven cars are being manufactured in its plant at 714 Harrison St., and that permanent positions are open for first class machinists, inspectors and assemblymen. Production for 1923, he says, is expected to exceed 200 cars of the very highest quality.

Abner Doble, inventor of the car and president of the company, gave a street demonstration in Los Angeles, September 9, in a car which had been displayed at 952 South Broadway in connection with advertisements by F. G. Cox & Co., Los Angeles brokers, offering Doble stock at $12.50 per share. Later the car was sent to Modesto to be displayed in its automobile show.

Light Adjusters' Busy Week.

Official headlight adjusting stations of the California Automobile Trade Association had their busiest week in the one ending September 9, when 3250 headlights were adjusted throughout the state. This far exceeded any previous weekly figure, and was caused by activity of traffic inspectors. The official stations have been operating 3 months, and more than 15,000 motorists have voluntarily sought their services. This period of grace, state, county and city officials believe, has been ample, and henceforth they will make drives against glare offenders on a large scale.

AUGUST SURPRISES PORTLAND DEALERS

Month Much Better Than Expected and Outlook for Brisk Fall Excellent Especially for Closed Cars

August was a surprise month in the Portland territory. While not on a par with July or May (June was the license-hiatus month), August was so busy that some dealers became short of cars.

This showing was gratifying, as ordinarily August is a slack month, and that was expected this year, but the peak headway reached in July was well maintained through the early portion of August.

The shortage of cars was well overcome by late in the month, and dealers now are well stocked, except for some closed models.

August was a period of price adjustment and of the arrival of new models, but these seem to have affected the general situation little. The new model Buicks, Reos, Oaklands, the Franklin with the new motor, and the new one-man top Ford, were the new comers.

September started rather slowly, but Portland dealers expect a fine fall business. Crops and general business conditions are good, and with the sale of crops a little later the country situation is expected to be vastly improved.

Plans continue for an Oregon state automotive association, but delays have been met as to an initial meeting in Portland, originally set for early September. As yet no new date has been set, according to Ralph J. Staehli, secretary of the Portland dealers' association and a moving spirit in the new body.

Recently Mr. Staehli, with Portland automobile men, has visited Hood River, McMinnville and other points to aid in forming of local associations. At all points they found sentiment strong for a state body. One of the important problems for such a body would be highway and motor vehicle legislation, at the session of the legislature next January.

Lawrence Therkelsen, one of the best known automobile men in Portland and for the last 5 years sales manager of Braly Auto Co., Franklin distributor, has resigned and formed Therkelsen Motor Co., to distribute the Rickenbacker in Oregon and retail it in Portland. Temporary quarters are on upper Washington St., in Automobile Row.

Simplex Auto Wheel Sales Co., to distribute the Simplex wheel throughout Oregon and California, is being formed in Portland under the direction of Leo C. Scrogin. The wheel, a newcomer to the territory, was invented in Spokane, where it is being manufactured. It is of steel, but more like the wooden artillery wheel than the disc. The spokes, about three times as many as in the wooden wheel, are of strong spring metal, flat and on a slight curve. At the hubs they are fastened into a steel core and set in hard rubber. As to rims both clincher and demountable types are provided. Increased resiliency is claimed for the wheel.

George W. Dean, who since 1915 has managed the Portland branch of Howard Automobile Co., Buick distributor, has left the Portland field and become general auditor of the big company. Mr. Dean now has charge of auditing accounts of all branches, with headquarters in the main office in San Francisco. Claud McGee, special representative of Mr. Howard, has charge of the Portland branch for the present, a new manager not having been named.

THE RICHEST STATE.

According to recent statistics, California has the right to call itself the richest state because it is richest per capita. It is stated a greater economic equality exists in San Francisco and the state than elsewhere in the nation. Though only in eighth place as to population, it is fifth in bank resources, in the colossal sum of $2,500,000,000. In banking power per capita, and bank deposits per capita, California leads. The meaning is, better distribution of wealth than anywhere on earth. Every sixth man owns his automobile.—N. Y. American.

Expansion in Star Plant.

Star Motor Co. of California, with headquarters in Oakland, will erect a $75,000 one-story warehouse of brick and concrete at East 14th St. and 107th Ave. This will be practically an adjunct to the nearby plant of Durant Motor Co. of California, with which Star is affiliated, and will have dimensions of 200x200 feet.

Recent news was that production would begin in the Star Motor Car Co. plant in Lansing, Mich., in September. Earlier, it was expected the first Star cars on the Coast would come from Lansing. Latest is that they will come from the Oakland plant, and on September 17—open models; closed models by October 1.

Smoke carefully in camp.

Mac-Dry Batteries in North.

Mac-Dry storage batteries, a new type of dry battery put out by the Mack Battery Co., Los Angeles, are to be manufactured in Portland, according to arrangements concluded by P. R. McGilton, president of the company, who made a motor trip from Los Angeles to the Rose City. A contract was closed with Thor Battery Co., Portland, to devote its activities to putting out Mac-Dry batteries, selling its own entire output under contract to the Mac-Dry people. The Thor factory, which has been making the Firefly battery, already has begun turning out the dry batteries under the formula of the Los Angeles company. A new factory will be built later by the Thor Co., which will build up production on the new Mac-Dry batteries to 100 per day, it is stated. The Portland factory will supply the needs of the Pacific Northwest, it is planned. Distribution for Oregon, Washington, Idaho and Montana was taken recently by the Mac-Dry Battery Co. of Oregon.

Leach-Biltwell Election.

With more than two-thirds of the stockholders represented, Leach-Biltwell Motor Car Co., Los Angeles, recently held its annual stockholders' meeting. New directors and officers for the coming year were elected with the unanimous approval of stockholders. Martin A. Leach, founder of the company, was re-elected president and general manager. S. J. Ulrey, of Ontario, is the new first vice president; Truman Berry, of Whittier, second vice president; Alfred Ashby, secretary-treasurer. Four new directors were elected—Lyman B. Ulrey, an automobile dealer in Oakland, with banking interests in Kings County; C. S. Chapman, of Fullerton; C. M. Hollingshead, Anaheim; and William Dibblek, of Puente.

Washington Tags Attractive.

Motor vehicle license plates in Washington for 1923 are being manufactured at the state penitentiary. They are said to be more durable and handsome than any used previously, having blue numbers and letters on a white enameled background, and resembling closely the California plates of 1922.

Automobile dealers all over the state have been notified by R. Franklin Hart, motor vehicle division superintendent, to place their applications early for 1923 dealer plates. These will be made in advance this year to avoid use of temporary card plates.

A fly can fly at 2:50 per mile.

BAY CITY'S SALES RANKS STABILIZED

No New Appointments, Sales Running On and On Without Lassitude or Undue Haste, and Outlook Is Good.

Late August and early September have been unusually devoid of important changes in the ranks of automobile and truck distributors in San Francisco. No new appontments have been announced, and sales have been running smoothly, showing neither late summer lassitude nor pre-autumn briskness. Practically every distributor handling well established lines has nothing to be worried over in the way of business. The way August sales held up in comparison with July and June, both record months, augurs well for a very satisfactory fall business, they believe.

J. W. Leavitt & Co., Oldsmobile and Columbia distributors for California, already are oversold on several models of the former, according to A. D. Plughoff, general manager, and he looks for a certain shortage on the Coast soon unless the coal and railroad deadlock is broken. Even though Eastern automobile factories do not curtail to any serious extent, their Coast dealers will suffer from smaller shipments and constant delays en route, Mr. Plughoff believes. Realizing the situation, J. W. Leavitt, president, now is in the East, to remain for an indefinite time, with the idea of hastening deliveries.

Edward V. Rickenbacker, vice president of Rickenbacker Motor Co., Detroit, was a San Francisco visitor recently. He was the guest of honor at a meeting at the St. Francis Hotel of more than 20 Rickenbacker dealers from Northern California points, arranged by Charles A. Kaar, distrbutor, with headquarters in San Francisco.

Making their first appearance on San Francisco salesroom floors for the first time, recent arrivals were the Marmon 7 passenger phaeton; Franklin Series 10, all models; Stephens 5 passenger brougham; Hupmobile sedan; Liberty touring car; Wills Sainte Claire 5 passenger brougham; Kissel sedan; and in the commercial vehicle field, the Federal Fast Express model.

Will Complete Coast Route Paving.

In the August 15 issue was the happy news of the celebration at Buelton, in Santa Barbara County, Calif., on completion of a 6 mile link of concrete paving that ended a 14 mile detour that was a terror. Now comes news of contracts let for paving 3½ miles on Cuestra Grade, between San Luis Obispo and Santa Maria, and 2 miles between San Juan and Gilroy. With these complete, all gaps in the coast route between San Francisco and Los Angeles will be paved.

C. S. A. A. Marysville Office.

The new Marysville district office of California State Automobile Association opened September 1, with L. E. Cutler in charge. The office will serve members in Yuba, Sutter, Colusa, Nevada and Sierra Counties. This is the twelfth district office in Northern California, in addition to seven touring bureaus.

New Peninsula Highway Assured.

Due largely to the persistence of Automobile Editor Pinkson of the San Francisco Chronicle, the project for a second main highway down the Peninsula, needed urgently, is said to be practically assured. The California State Automobile Association helped.

Trade Events in Oakland.

Harold D. Knudsen, former Pacific Northwest manager for Willys-Overland-Pacific Co., has joined the list of authorized Chevrolet dealers in Oakland and has formed Harold D. Knudsen Co., 1418-32 Webster St. He knows the territory well, as previous to his Northwest connection he was Oakland branch manager for Willys-Overland.

C. Earl Brooks, of long automobile sales experience in San Francisco and Oakland, has been appointed sales manager for Weaver-Wells Co., Studebaker dealer for Alameda and Contra Costa Counties.

Hamlin & Wichman, Hudson and Essex dealers, report that during August they sold more new cars than any other dealer in Northern California, runnng second only to San Francisco distributing headquarters. A year ago the company leased part of its present building at Broadway and 22nd St., and last February took over the entire building when business was running at $600,000 a year. Sales now are running at more than $1,000,000 per year, and increasing each month. Employes in September, 1921, numbered six; they now exceed 40.

Highway Commission Goes, Probably.

Friend W. Richardson, California state treasurer, nominated at the primaries as Republican candidate for governor and very likely to be elected, due to his record and promise to economize, is expected to retire the present highway commission and Austin B. Fletcher, its engineer.

It is said C. C. Cottrell, formerly under Fletcher, and who was Nevada's state highway engineer and resigned to manage California State Automobile Association's good roads bureau, will be backed strongly for Fletcher's place.

Mr. Cottrell saved the Far West many millions by going from Nevada to Washington and getting into the Federal road aid law a provision whereby the more Federally held area a state contains the less it pays of the cost of Federal aid roads, instead of 50-50, as formerly. Eastern states can stand the 50-50 basis because their development is not shackled by huge Federally (and foolishly, economists say) held areas.

Important Connecting Link.

Oregon, among others, has a Roosevelt Highway, a coast route. To connect it up "right," California's highway commission has designated, as part of the 7 per cent of its road mileage which comes first as to Federal aid, about 20 miles in Del Norte County, between Crescent City and the Oregon line.

Two New Rich Steel Products Co. Ideas

Rich Steel Products Co., of Los Angeles and Battle Creek, famous for its vacuum head pistons and other automotive output, and which recently marketed and has had a very large sale of the Silent Rich lawn mower, now has evolved the Rich lawn cultivator, a new form of steel rake, said to be superior to any other rake or hand cultivator. It has 14 cutter blades, and a horizontal cutter blade, to cut down weeds or top growths. Another new idea is a steel "lawn cutter blade. The lawn mower sales, the first season, exceeded 15,000.

RICH STEEL PRODUCTS PLANT, LOS ANGELES.

HOW TO GET CARS BOTHERS L. A. MEN

Fresh Autumnal Sales Impetus Causes Dealers, Like Those of Northwest, to Consider Panama Canal.

How to get cars enough from the factories to meet the increased demand resulting from enlivened autumn business—that is what is bothering Los Angeles distributors.

The rail strike lingers on, and before long it will be reinforced by winter weather as an obstacle to prompt arrival of shipments in Southern California. Cars cannot be driven overland without wearing down their sales prices seriously.

In common with dealers in the Pacific Northwest, those of Los Angeles are considerng the water route via Panama Canal, but they have not lost hope that rail routes will be operating with fair efficiency again in a few weeks.

A new agency in Los Angeles is for the Traffic truck, taken by Traffic Truck Sales Co., 1359 West Washington St., headed by J. E. Kendrick, as announced by R. Jackson Jones, general manager for the Traffic factory, with headquarters in San Francisco. Millard S. Binney, former Traffic factory advertising manager, will be wholesale manager in Southern California.

J. V. Baldwin Motor Co., Figueroa and 12th Sts., Chevrolet agency, has added 12,000 square feet of floor space for service and warehousing at Hope and 15th Sts., which will care for increasing business and give it a total of 30,000 square feet.

Southwestern Motors Co., Main and 12th Sts., another authorized Chevrolet agency, has made Charles Schonlaw sales manager, according to Charles G. Schlosser, general manager.

Troy Motor Sales Co., Nash and La Fayette car distributor, has made Frank B. Hughes retail sales manager, it is announced by Robert E. Breyer, general manager. Mr. Hughes has had 11 years automotive sales experience. For a year he was San Francisco manager for Western Motors Co., California distributor of Wills Sainte Claire cars, resigning that connection a month ago.

Los Angeles Oakland Co., retail distributor of Oakland cars, has moved across Olive St. to new quarters, 1026 South Olive St., almost opposite its old location.

New models received in Los Angeles are the Stephens 1923 types; Reo sport phaeton; Peerless 1923 types; Oldsmobile 4 cylinder brougham; Franklin Series 10 types; and Gardner business coupe.

Union Motors, Inc., Maxwell distributor, states that in a recent 30 day period 102 carloads of Maxwells had either been sold, just received, or started from Detroit for Los Angeles. According to C. A. Doyle, sales manager, Maxwell now is sixth in California registration totals.

Chevrolet sales in Los Angeles in August totaled 896 new cars, handled by 13 authorized agencies.

Stanley W. Smith, Inc., following the arrival of the first new Peerless models, had a stream of interested visitors that quickly rose into the thousands, many of them from quite remote parts of Southern California. First deliveries on the large number of orders already booked will begin after October 1.

WHAT IT'S DONE.

Did you ever stop to think of what the automobile has done to retail business in big cities? Driven it out into the suburbs—that's what it has done, or is rapidly doing. Drive around through the outlying districts and see what I mean.

The time is coming when practically all of the retail business of every big city will be done on its outer edges, rather than in the center. That's what accounts for all of these branch banks, chain groceries and markets, community theaters, and the like. Also, we must figure soon on a big movement back to the land—the country. For five years the movement has been into the city. The pendulum is due to swing back. The automobile is going to have a great deal to do with this movement, and is having even now. Don't you forget it. Also prohibition.—Manhattan Beach (Calif.) News.

More than 100 Ford dealers and representatives gathered at the Ambassador Hotel, September 13, from points within a 200 mile radius of Los Angeles, under direction of B. L. Graves, Los Angeles branch manager. It was a general convention following the policy of the Detroit factory of organizing dealer efforts throughout the country. Factory officials outlined policies and plans, with special emphasis on provisions for service to owners. Similar meetings will be held in San Diego, Santa Ana, Riverside, Santa Barbara, Bakersfield and Phoenix, the leading cities in the Los Angeles branch's territory, and in October and November there will be gatherings in San Francisco, Portland, Seattle, Salt Lake City and other centers of the Far West.

Accidents soon will cease, says a safety signal circular. Hurroo, hooray, hurrah, and then some! If true.

San Diego's Ford Economy Run.

E. L. Williams, manager of Powell's Ford headquarters, San Diego, was responsible for, and supervised, with the aid of Philip Bartlett, a 48 mile economy run, August 26, open to all Fords in San Diego County. A "mere" 189 competed for the loving cups and 40 other prizes, for first-to-seventh places in each of the six classes. All finished within the 4 hour limit. Eddie Pullen started the first contest and it took nearly 2 hours to get the entries checked, "gasolined" and sent on their way. The cars ranged from "fully dressed" ones, of ancient aspect some of them, to new ones. Some, indeed, were semi-stripped flappers of the Ford clan.

E. M. Kelly, who led in the speedster class, made the best score, 64 miles per gallon. He used only 3 quarts of Red Crown gasoline. Next best was Robert Burns' touring car, 48 miles per gallon. Third best was Paul Layman's closed car, 47.63 miles per gallon; fourth best, H. O. Newby's specially equipped car, 46.92; fifth best, E. L. Myers' delivery car, 38.16; sixth, Lawrence Rorabeck's truck with 1 ton chassis, 35.51.

Better Observe These "Stop" Signs.

"Stop. U. S. Officers. Auto Club of So. Cal." Such signs, supplied by the club, are to be erected from the Mexican border to Monterey County, in California. The tip is, stop if there is an officer where the sign is, and looking at you. He may want to search year car for hootch, or ask questions for other reasons. Failure to stop means pursuit and, perhaps, a bullet-punctured tire or body.

May Form New Arizona Club.

Tucson news is that the Southern Arizona Automobile Club may be formed, and affiliated with the Automobile Club of Southern California, unless several Southern Arizona men are put on the directorate of the Automobile Club of Arizona, which has headquarters in Phoenix. Discrimination is charged.

Arizona Conditions.

Late August news of Arizona, based on reports to a state industrial congress, is that the general situation is vastly better than last year, though July had summer quiet. More improvement is expected soon.

Signs Hurt Eyes and Candidates.

Political posters and cards, plastering rocks and cliffs on the scenic Jerome-Prescott route in Arizona, have hurt the eyes of motorists and the chances of a number of candidates, who are crying "Not guilty."

DAY AND NIGHT IN THIS PLACE ALIKE

Service Extraordinary and the Sale of Quaker Tires Coupled Successfully By Al Monroe in Los Angeles.

When a Scotchman says it's so, the chances are 100 to 1 that it is. He has considered it well.

Al Monroe is arranging to leave Los Angeles a little while—for a visit to the folks in his native land of lochs and heather; but meantime he has established something which, after extended investigation, he was convinced would remedy a serious deficiency.

In his new Al Monroe Tire Service plant at 918 South Flower St. there is a service department, 100 feet square, in which owners of individual motor cars or whole fleets of them receive service—not only in the daytime but at any hour of the night.

That is one big feature of the innovation. The other is, its completeness. The department has a full complement of the most modern means for washing, polishing, steam and vacuum cleaning, greasing, electrical and mechanical work, and tire service.

To make the idea quite complete, Monroe's fleet of service cars also is at the day-and-night disposal of the motoring public.

It is a splendid plant, with only one thing missing—a key for the service department. No matter. Not needed. The department is busy 24 hours a day.

To the service department the sales organization is linked closely. Seven high grade salesmen solicit the business of a large number of private owners, dealers and fleet owners; and aside from service they sell, devotedly and successfully, tires and tubes—Quaker tires and tubes—made by Quaker City Rubber Co., a fine old company which has been in business more than 40 years, and on Market St., Philadelphia, more than a quarter of a century, and now housed there in the thoroughly uptodate Quaker Building. The reputation of the company is that implied by a name people call it—"Trusty Friend". Its Pacific Coast interests are under supervision of L. G. Lehousse, one of the Coast's veteran tire men, who joined Quaker last year and opened offices in Williams Building, San Francisco. By his energy and their high quality, the new Quaker black tread tires, in all sizes of cord and fabric types, are making excellent headway in the Pacific region.

Monroe is Los Angeles County distributor for Quaker tires and tubes, and his sales department is headed by William R. Willis, who has worked 13 years in the management of tire sales for some of the largest manufacturers.

Henry Benson, a reputable accountant, manages Monroe's office and accounts. He stands for promptness and accuracy. So does C. E. Englehart, who has charge of the mechanical department and gives all work his personal attention and the benefit of many years of experience.

It's a good proposition—ye canna beat it, putting it as Harry Lauder would; and it is functioning fine.

Radio outfits on all cars, some day.

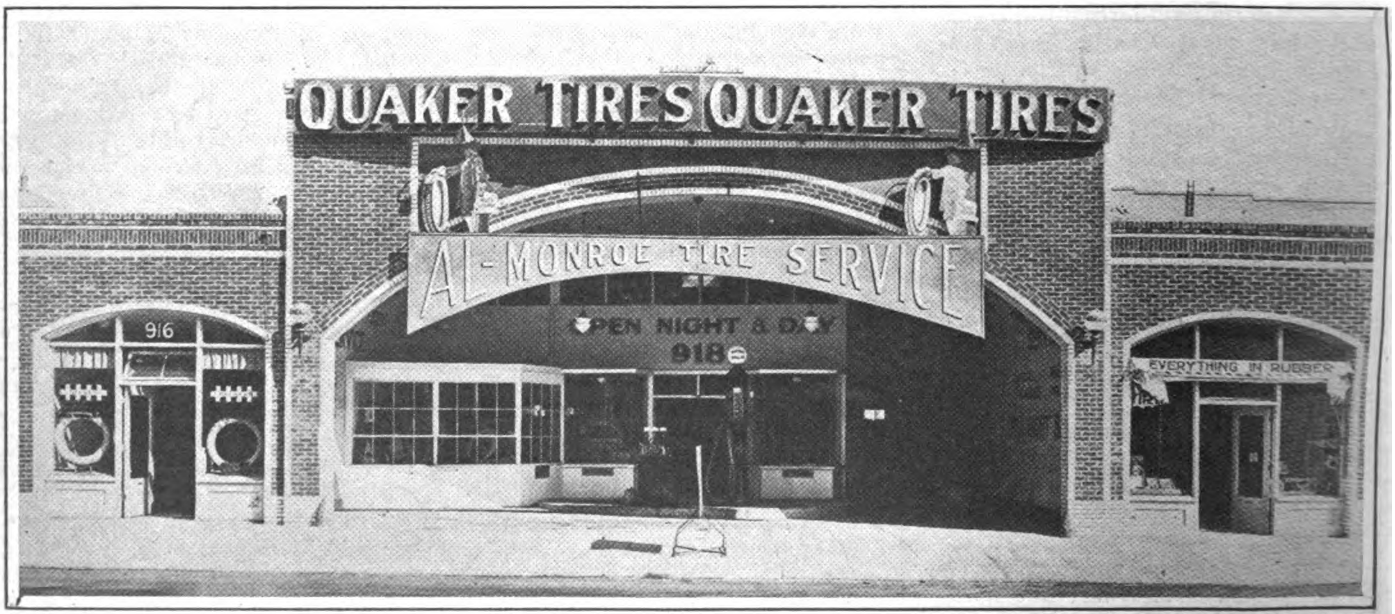
Studebaker Economy Run.

An economy run somewhat out of the ordinary was staged recently by nine Studebaker dealers of Southern California, from Los Angeles to Lake Arrowhead in the San Bernardino Mountains, and return. Nine Big Six cars were entered, and the winner was the Long Beach dealer, Glenn E. Thomas. The run was suggested by the Lake Arrowhead Co. to determine gasoline and oil costs of a 7 passenger touring car for the round trip. The cup was awarded to the driver who, after buying fuel and lubricant to fill his tanks at the finish, had the most change left out of a $5 bill pasted on each car's windshield. A. W. Maxwell, Los Angeles branch manager for Studebaker, checked in the cars and found the winning car had paid $2.27 for 9 gallons of gasoline and one pint of oil. On the round trip of 178 miles the cars averaged 15.86 miles per gallon of gasoline.

Fresno Tire Plant Under Way.

According to J. H. Christian, president of Fresno Tire & Rubber Co., with temporary offices in Mattei Building, Fresno, production will begin in the new plant at Selma, south of Fresno, about December 1. By then it is expected that the first manufacturing unit, a 3 story building, 60x250 feet, will be completed. It will cost $126,000, and $150,000 worth of tire-making machinery will be installed.

National Motor Bearings Co., San Francisco, manufacturer of National bearings, has moved from 690 Turk St. to larger and more centrally located quarters at 1609 Pine St. L. A. Johnson is manager.



AL. MONROE'S NEW SERVICE STATION, LOS ANGELES, HEADQUARTERS FOR QUAKER TIRES.

ORDERS WON BY AN ADVERTISING IDEA

From Dullness to Crowded Capacity in a Few Days, Is Spectacle Presented by a Los Angeles Garage.

As August wore on, business "got kinda dull" in the midst of the new, ordinarily busy northern part of the Wilshire district in Los Angeles. Among others it affected Superior Garage, 226 South Western Ave., under management of Farlie R. Sweat and Earle J. Wolfe, and occupying more than 13,000 square feet of repair and storage place.

Now all that space is simply jammed with cars, and Superior Garage is working day and night, yet is unable to keep up with orders. Making good money. All in the course of a few days. What did it? Psychology applied simply and effectively, by means of advertising in a small neighborhood newspaper, and a large sign displayed in the garage, where all incomers had to see it.

September Light Overhaul Special—that caught the eye. It began to be advertised September 1. What it offered actually was no more than was supplied for the same prices before—but it told how much really is done for the money. It seemed—and was—a whole lot; and response was immediate. Labor Day was labor day in fact, in that shop; no holiday possible; and at this writing it is chock-a-block with work.

"When a car owner orders an engine cleaned of carbon, and the valves ground, much more work than that has to be done," said Mr. Wolfe. "Often the carburetor, vacuum tank, screens and gasoline line are cleaned, by hand or by air. Much of this is made necessary by a clean, faster-running engine. This extra work has not been understood fully, heretofore. By calling attention to it we have shown not only that we offer a lot for a man's money, but undoubtedly it has suggested to many that all the things we mention are things which should be done, and that having them done at the prices named is a good investment."

The offers in the September Light Overhaul Special are: For 4 cylinder cars, $7.50; 6 cylinder, $9.50; 8 cylinder, $12.50; 12 cylinder, $15. The job includes such a varied assortment of service as cleaning carbon from cylinders; valve grinding; valve and seat machine facing if necessary; carburetor, vacuum tank, screens and gasoline lines air cleaned; carburetor adjustment; ignition points dressed and adjusted; distributor cleaned; spark plugs cleaned and adjusted; every bolt and nut on the car tightened; wheels checked and aligned; thorough oiling and greasing; brakes adjusted and equalized. These items, not generally understood previously, are stated in the offer.

Oil Men Promoted.

Three officials of Union Oil Co. in the Portland field have been promoted. D. H. Kelly, who has been district sales manager for Portland, has been transferred to Seattle to have charge of that district, which is important because it includes British Columbia, with supervision over a large refinery at Vancouver, B. C. C. L. Tostevin, who has been assistant sales manager in the Portland district, has been raised to the position of sales manager, and C. C. Ireland has taken the place vacated by Mr. Tostevin. Mr. Ireland has had charge of the company retail service stations and general sales promotion work in the Portland field.

HIRSCH - BLUM CO.
Kenyon Cord
TIRES TUBES

A MONUMENT TO INTELLIGENT ENERGY.
Hirsch-Blum Co., San Francisco, had to begin by hanging onto a shoestring, as it were, in the worst period the tire business ever had. Did they lose out? The building pictured, and their well known success in introducing Kenyon cord tires in the Coast region form the answer.

C. C. Fagan, head of C. C. Fagan Co., Portland, Pierce-Arrow and Wills Sainte Claire distributor for that section, has returned to his desk after several weeks of serious illness. He was on a business visit in Seattle when he was stricken with appendicitis. After a hospital operation, and a couple of weeks there, he recovered sufficiently to be brought to Portland and now declares he is as good as ever.

Recently drivers of "one-eyed" cars in Imperial County, Calif., have been given suspended fines, and told that after September no such leniency would be shown.

Began in Bad Times, and Won.

Early in April, 1921, Jay Hirsch and Myrt Blum started in the tire business on Van Ness Ave., San Francisco in a most modest and unpretentious way. The Hirsch-Blum Co. was a new firm, and its task was to introduce the Kenyon cord tire, during the most adverse times the tire industry ever has known.

Today, however, the Hirsch-Blum Co., as factory representative of C. Kenyon Co., Inc., of Brooklyn, has succeeded in covering the Pacific Coast with Kenyon cord distributors and dealers. In addition, it has its own retail business in San Francisco, devoted exclusively to the sale of Kenyon cord tires and tubes, under the sales management of John P. Costello, a veteran of many years in the tire business.

During the time that the Hirsch-Blum Co. has been the Kenyon representative, it has moved its quarters twice, due to increased business. It now occupies its new 2 story building on Geary, between Polk and Van Ness Ave. Keen observers in the business say that it is one of the most uptodate plants of its kind on the Pacific Slope.

C. Kenyon Co., Inc., established in 1857, is one of the oldest rubber firms in the United States. For 65 years it has merchandised its line on a consistent policy, not the least phase of which was a square deal to all. Distributors, dealers and consumers have been quick to realize this. The result is a most gratifying business not only in the Western states but throughout the United States.

They Want Fairer Taxation!

Automobile owners of Western Washington are overwhelmingly in favor of lower special taxes on motor vehicles. This is indicated by the first tabulations taken of the poll being made of membership of the Automobile Club of Western Washington. The first 1000 votes showed a sentiment better than 3 to 1 for a lower levy, according to W. C. Baldwin, of Tacoma, chairman of the club's legislative committee.

There also is strong sentiment for a flat registration fee of not more than $2, and a gasoline tax to provide the additional revenue which may be necessary, instead of the present threefold system of a horsepower and weight license tax, driver's tax, and 1 cent tax on gasoline. The car owners' feeling in favor of a better adjustment of taxes is a fact which the club's legislative group will work earnestly to impress on the pre-election consciousness of all candidates for the state legislature.

Yep—and inspect the brakes.

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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SEPTEMBER 15, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

It Was Written in a Little Book

NOW and then there come reports of this or that retail merchant of automotive things overcharging or giving poor service. One feels more sorry for the merchant than for those who claim to have been "stung," because, whether he be accused justly or not, in almost every case his prosperity, happiness and usefulness in a community suffer eventually, if not immediately.

No kind of advertising travels around more industriously. Yet, oddly, some who are guilty do not realize it. They are like the woman who kept an inn in England, and who kept a little book in which visitors were invited to write verses, and such. She could not understand why visitors laughed when they saw what one man wrote in the book; nor why her patronage dropped off after he wrote it. What he wrote was: "Quoth the raven ———."

"Engine" Versus "Motor"

NO legal contract can be binding unless there has been a "meeting of minds." A common language makes this possible, but unless care is taken to be specific, confusion may arise even then.

In 1916 the Society of Automotive Engineers prepared, in co-operation with engineers and representatives of service departments of automobile companies, a list of standard names for the common automobile parts. This has saved a surprising amount of time and money in the definite and prompt making and filling of orders for parts. However, certain names, the use of which was recommended, were not adopted as generally as might be desired. Probably the most important of these is "engine," the word "motor" being used to a certain extent instead.

"Motor" is the technically correct name for an electric unit used for changing electrical into mechanical energy, and its meaning as applied to internal-combustion engines can be understood only by the context. An electric motor is commonly used on gasoline automobiles in connection with the starting apparatus.

The continued misuse of the word "motor" probably is due to two factors. It is used to designate a moving vehicle. In addition, many companies building engines were organized in the early years of the industry and included the word "motor" in their official names. As the companies prospered, the names became valuable assets and a change has been considered unwise from a business standpoint.

Nomenclature is shaped by usage. Many words are common today which in a technically derivative sense are entirely illogical, as well as entirely different in meaning from what they meant originally. "Electric motor," not "electric engine," is the technical name for the electric unit; and the term "steam motor" is not used as applying to a prime-mover. "Engine trucks" and "engine vehicles" would be equally anomalous.

There seems to be little doubt of the technical consistency of the use of the word "engine" to denote the internal-combustion or "gas" unit of motor vehicles. Therefore, right about! Get it right You won't? Oh, very well.

Don't Let Stage Men Hog It

MOLASSES catches more flies than vinegar does. Maybe that is why Briggs, famous cartoonist, was chosen to illustrate a booklet entitled "Common Sense on the Highway," issued by the National Automobile Chamber of Commerce motor truck committee, and for which there is said to be a rapidly increasing demand among large users of trucks. Civility is said to be increasing among the country's 1,000,000 truck drivers on account of the common sense in the booklet, plus or perhaps in addition to Briggs' work. He's the chap who draws "The Days of Real Sport," "Ain't It a Grand an' Glorious Feelin'?", "When a Feller Needs a Friend," and so on.

The same molasses that catches friends among truck drivers catches friends for them, among the public; and it would do the same for the masters of large motor stage companies, notably those operating long distances from and to Los Angeles. These gentlemen, said to be drawing large dividends while pleading that additional taxation would be confiscatory, would do well to ask the N. A. C. C. for some of those booklets.

Where there's smoke there must be fire. There are complaints of drivers of private cars being endangered by stage drivers hogging not merely the center but even to the left of the road, and of their taking undue chances of injuring others in passing, without slackening speed, through groups of other going-and-coming vehicles.

It cannot be denied successfully that stage drivers often ignore the speed limit to keep to schedule; that they toot arrogantly behind private car drivers, who are going as fast as the law specifies, the message in the toot being: "Slow up, you galoot, I wanta pass!" And when they do pass, they cut in ahead close enough to rub the arrogance in.

How do they "get that way?" A lot of stage drivers are fine fellows, by nature. Is it a case of "like master, like man?"

Private car owners should not stand for this. Those who are members of clubs should report all cases to headquarters. Letters to newspapers, county supervisors and the railroad commission, and other means, also are available.

A Little Chat with the Boss

SAY, Boss, employer of others, were you ever "dead for sleep"? Sumpin' awful, isn't it. Well, many an employe, some time or other, whether because—but not matter about the cause, the point is that sometimes cleaning the carbon out won't remove the dopiness of a man or other mechanism, but rest will. Dopy work is likely to be unsatisfactory in quantity or quality or both. Working when dopy is misery till—or if—work works the dopiness out. Sometimes it don't, especially if it is sitting-down work or stand-up indoor work.

About 40 years ago, when railways employed men to solicit shipments, one crackerjack solicitor, who was popular and got the business, always looked refreshingly cheerful, and was. He had two different bosses in the several years the writer knew him, and even in those old-fashioned, man-grinding days, when even office men slaved from 7 or 8 in the morning till 6 or later in the evening, with sometimes only half an hour for lunch, both of those bosses let that crackerjack have his own way about a little peculiarity of his; putting a lounge in the back room behind the office; making what some department store and other employers nowadays call a rest room; and every day, after lunch, he took a nap on that lounge, and when he awoke he and his smile went out and got the business again.

Eventually, resting whatever or whoever is tired and not deserving of being "fired," will be ordinary economic practice. Eventually. Why not now?

As It Is Done in England

CROSS Crossings Cautiously, is the advice on placards on which a locomotive is looming mountainously above a motor car containing human beings, and which is about to be converted into a "used car." The picture gives tremendous punch to the advice by magnifying the locomotive's size. The effect on the memory should be lasting, as students of a memory system are told to enlarge, in the mind's eye, the thing to be remembered.

Yet the number of railroad crossing deaths will not be reduced as they should be until grade crossings are eliminated. Meantime, the railroads should be forced to at least have automatic signals at all such crossings.

Motorists are permitted to cross railways in this country. No man, afoot, on horseback or in any vehicle except an airplane, may cross one in England without being subject to arrest. However, over there, there is a way over or under them. The railway lines are in tunnels, cuts or on elevated embankments. There are far fewer railway accidents in England than in this country.

Sold! 4500 Andersons for $6,000,000

From North, South, East and West, distributors of Anderson cars gathered at Rock Hill, S. C., August 24, for a great 3 day convention arranged by Anderson Motor Co.

They were escorted to the factory by the Georgia Military Band. After luncheon Mayor J. B. Johnson uttered a welcome, as did J. G. Anderson, the company's founder.

The big movement, however, was when the new Anderson Light Aluminum Sixes were unveiled—two models, the 5 passenger phaeton, listing at $1195, and the coach, $1450.

And then—within 15 minutes—orders totaling about $6,000,000 were placed! And many others have been received since.

The three days were full of get-together benefits. There was a dinner, with D. W. Daniels, of Clemson College, as principal speaker; a barbecue at Catawba River Country Club, followed by a moonlight swimming party; and so on. When the convention closed more than 50 of the dealers drove away from the factory.

Immediately after the convention the two new models were shipped to New York, to be viewed by dealers and others in the Eastern territory.

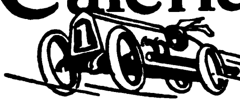
An announcement that stirred the convention was that active management of the Anderson Co. now is in the hands of a group of unusually young men—all under 35. Just before the convention, the stockholders elected J. G. Anderson, the founder, chairman of the board; J. W. Anderson, president; W. A. Anderson, vice president. Mr. Roberts was named director of sales and advertising.

Rock Hill, S.C., is going to be a busy place. Night shifts for the Anderson factory, for some time to come!

Powe Is A. E. A. Traffic Manager

Automotive Equipment Association announces that W. R. Powe has discontinued all other connections and will give his full time as general traffic manager of the association.

Calendar of Coming Events



Sept. 13-15—Sixth Annual Fall Convention, Motor and Accessory Manufacturers Assn., Hotel Lafayette, Buffalo.

Sept. 15-20—Annual Show at The Hague, Netherlands.

Sept. 16—Opening of New Track at Kansas City.

Sept. 25-Oct. 3—Automobile Show, Kaiserdamm Hall, Berlin, Auspices German Automobile Mfrs. Assn.

Sept. 27-30—Automobile and Accessory Exhibits, Orange County Fair, Santa Ana, Calif.

Sept. 30—150 Mile Race, Fresno, Calif.

October—Annual General Convention, California Automobile Trade Association, Santa Barbara.

Oct. 4-8—Automobile Show, Ventura County Fair, Ventura, Calif.; Paul Hutchinson, Manager.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Oct 17-21—Automobile and Accessory Show, County Fair Grounds, Pomona, Calif.; Auspices Citrus Belt Automobile Trades Assn. James E. Granger, Show Manager.

Oct. 18-20—Convention of National Assn. of Farm Equipment Mfrs., Chicago.

Oct. 26-27—National meeting of Society of Automotive Engineers, Detroit.

November—Tent Show by Motor Car Dealers' Assn. of Los Angeles.

Nov. 3-11—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 13-18—Automotive Equipment Assn. Annual Show, Chicago.

Nov 30. (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

December—Automobile Show, Pasadena, Calif.; Auspices Motor Car Dealers' Assn. Earl C. Lindley, Secretary.

Jan. 6-13—National Show, Grand Central Palace, New York.

Jan. 6-13—Automobile Salon, Hotel Commodore, New York.

Jan. 8-13—Second National Show, Automobile Body Builders' Assn., 12th Reg. Armory, 62d St. West of Broadway, New York.

Jan. 27-Feb. 3—National Show, Coliseum and First Regiment Armory, Chicago.

Jan. 27-Feb. 3—Automobile Salon, Chicago.

Apl. 19-20—7th Annual Convention, Bankhead National Highway Assn., and United States Good Roads Show of Machinery and Material, Greenville, S. C.

Apl. 19-20—7th Annual Convention, Bankhead National Highway Assn., Greenville, S. C.

Heavy Production Continued

August Output Expected to Beat that of Year Ago By 50 Per Cent and Exports Are Improving

HEAVY production continued in the automobile industry during August, according to reports received from factories by the National Automobile Chamber of Commerce. While the total production for July reached 244,444, estimates based on shipping reports for the first three weeks of August indicated that figure would be exceeded by more than 20,000. Last year August production exceeded July by 4445 machines, the figures being 176,340 in July and 180,785 in August. Thus, July, 1922, exceeded the same month a year ago by 38 per cent, and the August, 1922, outlook was far over per cent, and the August, 1922, outlook was for over August of 1921 by about 50 per cent. Production of cars and trucks, the first 7 months of 1922, was 1,395,066, compared with 1,668,550 for all of 1921.

The export situation continues to show improvement. Passenger car exports in May exceeded April by 6 per cent, and June exceeded May by 15 per cent. The revival of truck business abroad continues to be affected by disturbed industrial conditions in Europe. Exports in May, however, exceeded April by 36 per cent. June exports of trucks decreased 7 per cent under May.

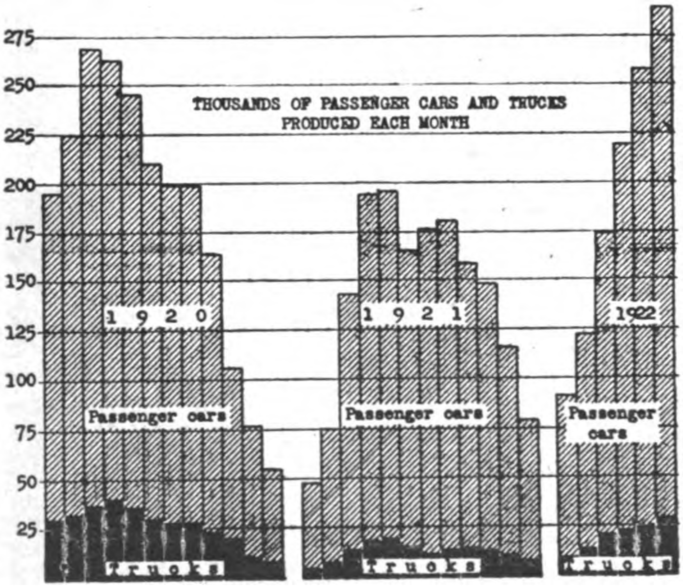
Comments on the Railway Situation

As fall approaches it seems more and more likely that the railroads will be overstrained by the piles of food products, coal and manufactures that soon will be stacked in their freight stations, says the Industrial Digest. Perhaps the overstrain will not lead to a tie up; but if uncomfortable congestion is avoided it will be due either to unprecedented efficiency of the roads or failure of the rush of freight to come up to present expectations.

It is hard to get figures which show clearly how many cars will be available to meet the rush, and what condition those cars will be in. The railroads control the sources of statistics, and naturally they are anxious to make it appear that their equipment has not been damaged seriously by the strike, and that they will handle the coming situation with glorious efficiency. Impartial observers, however, are not quite so hopeful.

Brookmire Economic Service, for instance, points out that the longer the shopmen's strike lasts the deeper will be its effect upon the available supply of cars. This must be considered, it says, in connection with the heavy coal shipments now being started, the unusually large crop movement, and the increase in manufacturing activity that most factories expect or have already felt.

No one knows yet what condition railroad equipment will be in. The longer the shop strike lasts, the worse the equipment undoubtedly will be. Yet the railroads declare that their cars and locomotives are in good shape, and that they will have lots of rolling stock when it is needed.



THREE-YEAR PASSENGER CAR AND TRUCK MAKING RECORD. Cleveland Trust Co., in speaking of automobile production in June, 1922, as of "almost incredibly great volume," printed a chart, reproduced here, showing passenger cars and trucks manufactured (in thousands), in this country per month in 1920, 1921, and 1922. Truck production is indicated by the black lower portions of columns. The figures for 1920 and first half of 1921 are partly estimated. In 1920, peak was reached in March and April; also in 1921. This year, May and June exceeded March and April greatly, July beat June, and probably August beat July.

In Case of Severe Railway Strike

Reports from manufacturing centers are more hopeful in the matter of coal supply, with mines resuming operations and carriers recruiting their forces.

The motor car makers and the N. A. C. C. are carefully watching developments in the railroad strike situation and its effect on fall operations. There already has been some handling of materials overland by truck, that ordinarily would travel by rail, and the driving of finished cars overland has increased through lack of automobile freight car supply. Motor transport for materials, and overland deliveries of finished machines, will be undertaken on a large scale if rail carriers fail.

Motor cars will care for the traveling public in any crisis, says Roy D. Chapin, vice president National Automobile Chamber of Commerce.

The chief problem will be not in providing enough motor cars and motor buses in our large cities, but to arrange for adequate parking spaces. If Long Islanders motored to New York, that city would have to park 22,000 cars.

There are three main types of passenger traffic by railroads: 1—city workers, traveling between suburban areas and business; 2—salesmen and executives, traveling from city to city; 3—vacationists.

Group 1 is the largest element in rail passenger travel. The suburban areas surrounding our large cities have been built up by the motor car in conjunction with the railroads. The rail lines form the main streams of travel, with motor cars feeding into them. Every third family in the suburban district owns a motor. The business man in normal times is likely to find it more convenient to drive to the station than directly to the city, but in a crisis he can drive directly into work taking his neighbor with him.

In addition to the privately owned cars there are 20,000 buses in the United States and thousands of taxicabs.

Within a 40 mile radius of each of the seven largest cities in the country there are enough cars to carry the entire adult population to business, as indicated by the following table:

	Motor Car Regis.	Number Adults	Adults Per Car
Suburban Area of New York	221,645	1,816,588	7
" " " Chicago	100,826	588,619	6
" " " Philadelphia	75,474	581,689	7
" " " Detroit	40,000	223,168	6
" " " Cleveland	56,370	325,650	6
" " " St. Louis	30,982	266,486	8
" " " Boston	120,200	816,471	7

Declares Ford Will Not Shut Down

Cincinnati news, September 9, quoted a coal company president as saying he had contracted the day before to deliver 4,000,000 tons of coal to Ford Motor Co. He indicated this would obviate need of closing the Ford plants September 16. He spoke after receiving a telegram from J. E. Cochran, Detroit, representing Ford.

Do You Want This Book

Good Driving Is Mostly NICE STEERING

HOW TO PARK
HOW TO IMPROVE YOUR DRIVING
HOW TO ENJOY YOUR MOTOR CAR MORE

ARE YOU A NICE STEERER?

INDEX PAGE 2

THIS booklet contains more real usable, brief "driving hints" than any you have ever seen.

It has opened the eyes of the experienced driver as well as those of the novice.

How Many?

How many drivers can park?

How many drivers brake correctly?

How many drivers can set spark plugs?

How many drivers know a safe turn from a dangerous one?

There is a tankful of such interesting, important information in this booklet.

As many copies as you can profitably use will be mailed upon receipt of the attached card.

THE TIMKEN ROLLER BEARING CO.

CANTON

OHIO

Dealers and Salesmen

E ask you to run a short experiment when you receive this booklet. Show it to anyone owning a car or interested in owning a car. After he has glanced at several pages, change the subject of conversation and take the book out of his hands. Ten to one he will immediately ask to see it again---and want a copy for his own.

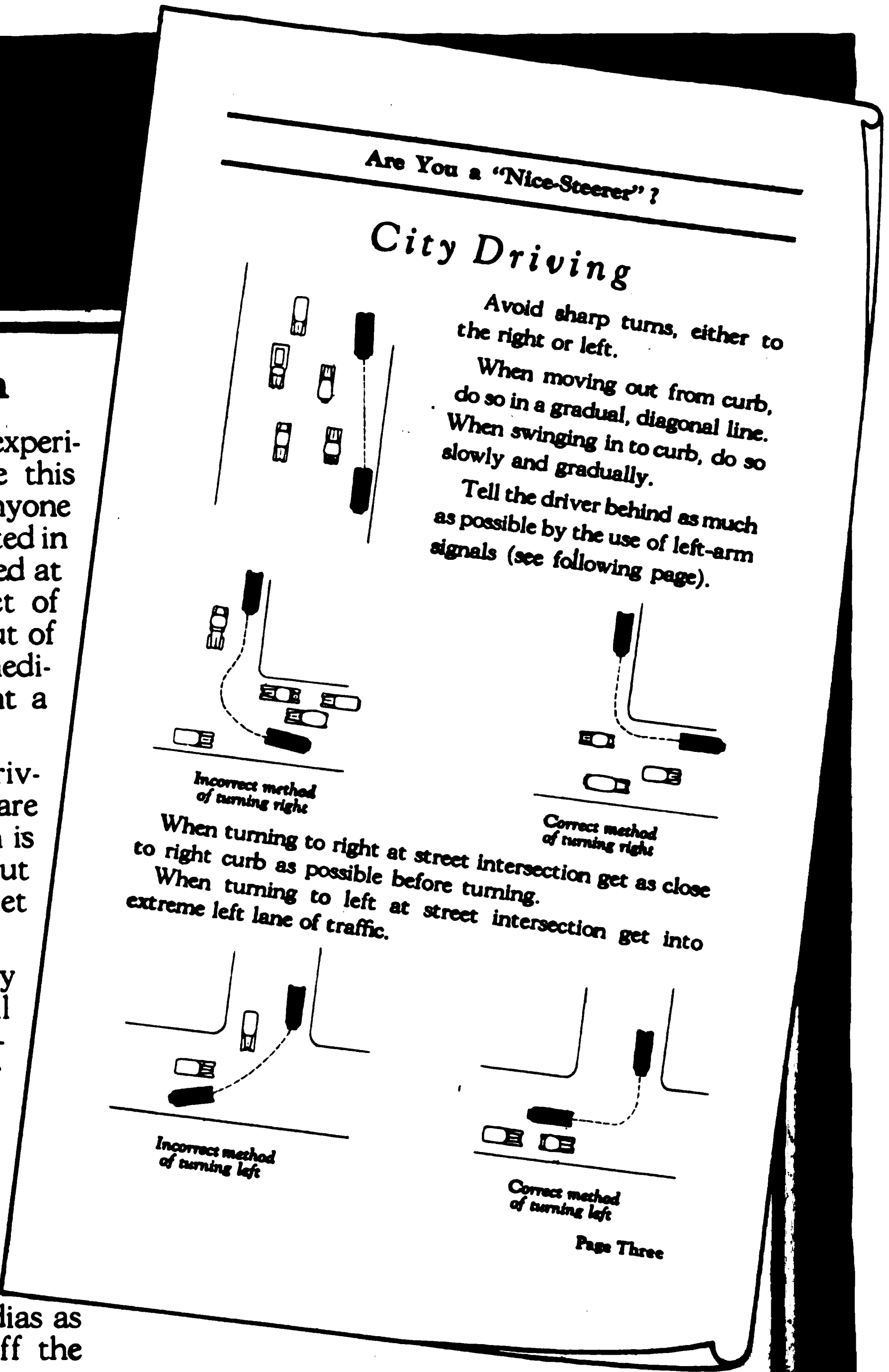
You and your associates set the driving criterion in your town. You are often asked for information which is difficult to give verbally or without sketches or diagrams. This booklet aims to fill that long-felt need.

A copy of this booklet in every machine leaving your garage will make every owner a better driver---and consequently a better rooter for you and your car.

Two pages in the rear are devoted to the care and maintenance of Timken Bearings.

In the interests of better and safer driving, we offer you as many of these Driving Encyclopedias as you can profitably use. Tear off the post card.

THE TIMKEN ROLLER BEARING CO.
CANTON, OHIO



Are You a "Nice-Steerer"?

City Driving

Avoid sharp turns, either to the right or left.

When moving out from curb, do so in a gradual, diagonal line. When swinging in to curb, do so slowly and gradually.

Tell the driver behind as much as possible by the use of left-arm signals (see following page).

Incorrect method of turning right

Correct method of turning right

When turning to right at street intersection get as close to right curb as possible before turning.

When turning to left at street intersection get into extreme left lane of traffic.

Incorrect method of turning left

Correct method of turning left

Page Three

This is an actual reproduction of page 3 of this new booklet.
There are 20 pages of such interesting data.

Please send me______________copies of the book "Good Driving is Mostly Nice-Steering"

These are to be supplied without any expense or obligation to me. I will place them where visitors to my place of business can take one if they desire.

Name__________________________
Street__________________________
City & State______________________
Business________________________

Stutz Organization Thrills

New Nationwide Sales Impulse Follows Schwab Control and Everything Is Coming On Finely

By WINDSOR T. WHITE.
Chairman Motor Truck Committee, National Automobile Chamber of Commerce.

CONCURRENT with the transfer of the control of Stutz Motor Car Co. to the interests identified with Charles M. Schwab, head of the Bethlehem Steel Co., increased activities have been apparent in every department. The marked reduction in the prices of all models has had a desirable effect on sales and increased specifications of cars for immediate delivery have been received from dealers in all parts of the country. Also, there have been numerous requests for dealer franchises from merchants of consequence in many centers where Stutz temporarily has not been represented. Quite a number of these applications have been approved by the factory and contracts signed. In a number of instances, the requests have come from dealers who handled the Stutz at the beginning of its notable career and now express eagerness to return to the fold in anticipation of the important development of which Mr. Schwab's control seems prophetic.

District salesmen have been assigned territories and are in the field, explaining the company's plans.

The increased interest is very pleasing to W. N. Thompson, president and general manager, especially as a number of former Stutz dealers—among them some who figured most prominently in the early activties of the company—have again made application for the line, many seeking it on an exclusive basis. Mr. Thompson says:

"Our future plans depend in no small measure on a considerable enlargement of our distributing organization, and from all indications we are going to acquire this without any difficulty. In our opinion the Stutz is going to be one of the most desirable franchises in the field, and we have been surprised to see how quickly the trade has grasped the significance of recent developments."

Dealers report a wholesome increase in retail buying since the price reduction, the activity covering the entire line of models.

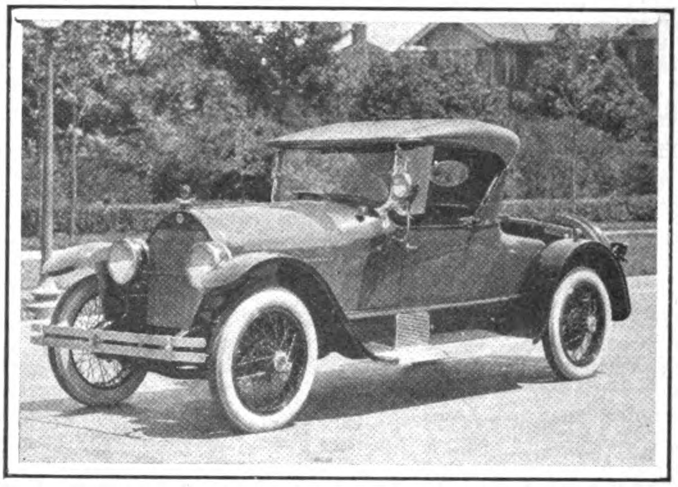
Ford Makes Financial Statement

A Ford Motor Co. statement filed recently in Massachusetts showed its financial condition April 30, 1922: Total assets and liabilities, $400,548,946, exceeding 1921 by $55,408,389, and 1920 by $93,853,837. Inventories were written down to $45,208,094, compared with $63,848,157 in 1921 and $96,859,012 in 1920. Cash and debts receivable, $148,615,334, exceeded 1921 by $61,620,169. Accounts and notes payable, $33,089,894, were $15,796,247 less than in 1921. Profit and loss surplus, $240,478,736, exceeded 1921 by $57,601,040, and 1920 by $74,799,604. Securities totaling $15,749,953 exceeded 1921 by about $5,400,000. Depreciation and amortization reserves, $50,829,307, exceeded 1921 by $7,335,913. Patent rights were valued at $110,740; good will at $20,517,986; machinery and equipment at $49,401,132; real estate at $81,026,633; furniture, fixtures and automobiles at $39,221,860.

The Situation as Reeves Sees It

Let Alfred Reeves, general manager of the National Automobile Chamber of Commerce, say it: "There is every prospect that the automobile trade will be better in 1923 than in the present year. This year's production will exceed 2,000,000 motor vehicles, as against 1,668,000 for 1921 and 2,205,197, the record figures of 1920.

"There have not been the usual cancellations which generally follow after July 4, largely because so many orders are for closed cars, which will continue to be in heavy demand the remainder of the year Varying with the locality, from 25 to 50 per cent of total sales now are for enclosed types of bodies. Women like them."



STUTZ SPEEDWAY ROADSTER, DESCRIBED SEPTEMBER 1.

For Sales Idea Co-operation

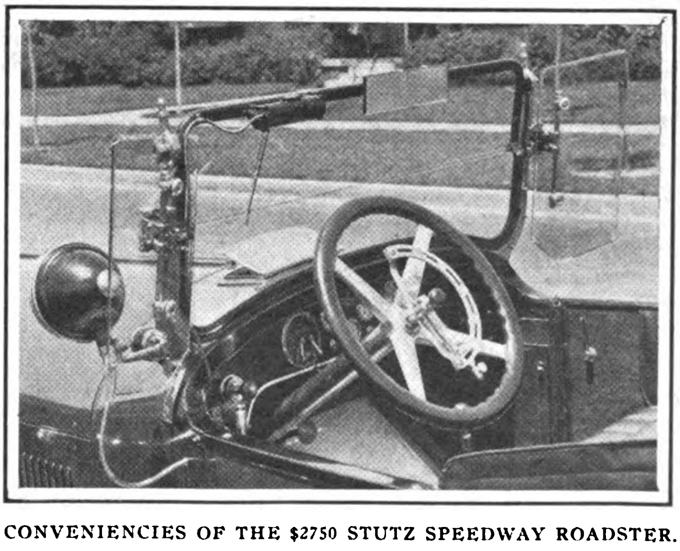
Publication of Sales Executive, a paper for sales executives of member concerns in Automotive Equipment Association, has been begun by the merchandising department, directed by Ray Sherman. The paper will be published once or twice a month, depending upon the response with which it is met by the men for whom it is intended. Its chief purpose is to distribute to all the sales executives the good ideas which others have tried and found successful.

Metz Bankruptcy Requested

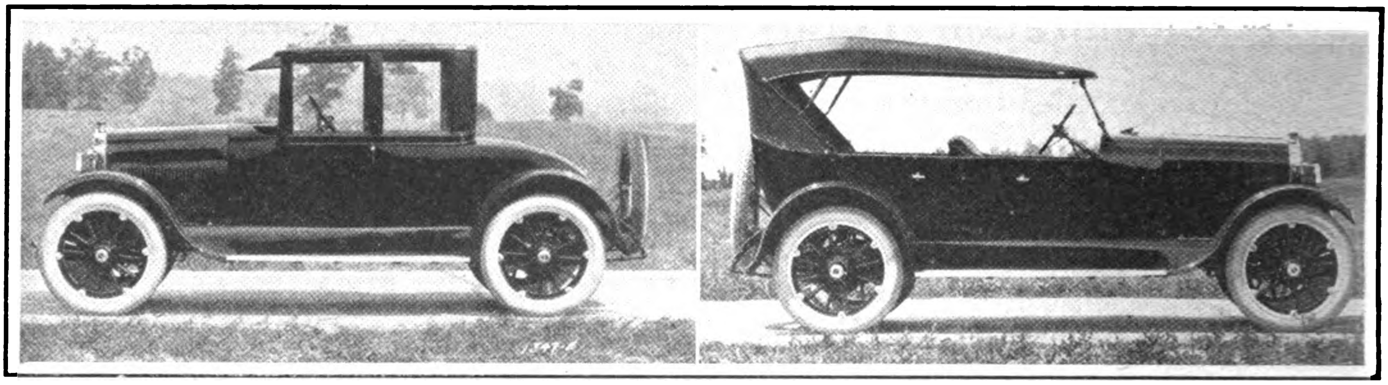
Bankruptcy proceedings for Metz Mfg. Co., Waltham, Mass., were petitioned for on August 17 in Boston. The petitioners, all of whom presented small claims, were Johns-Manville Co., Culver-Stearns Mfg. Co., and Jacob I. Hanflig, of Chelsea, Mass.

Uniontown Labor Day Race Not Run

There was to have been a race on the board track in Uniontown, Pa., some 50 miles south of Pittsburgh, on Labor Day. It was called off. The previous race, June 17, 225 miles, was won by Murphy at 102.08 miles per hour. Attendance was poor.



CONVENIENCIES OF THE $2750 STUTZ SPEEDWAY ROADSTER.



THE 2 PASSENGER COUPE AND 5 PASSENGER TOURING MODELS IN THE NEW 1923 OAKLAND SERIES.

New Points in Oakland Line

Deeper Bodies, Handier Ways to Dim the Headlights and Control Spark and Gear, Are Features

THE new 1923 Oakland series of cars is distinctly new—deeper in body lines and larger in appearance. The distinctive Oakland streamline has been enhanced by the new sweeping full crown fenders, which are wider, heavier and extend over the wheels in a deeper arc. Lowering the running board an inch and a half, and the new full crown fenders and running board shield, are mainly responsible for the full appearance of grace and power which sets this new series apart as the most distinctive the Oakland Motor Car Co. has turned out.

The comfort and convenience of the owner has evidently been uppermost in the minds of the engineers, judging by the mechanical changes and improvements noted. For instance, there is a lever for dimming lights, mounted on the top of the steering column. This is a distinct innovation. In fact, the Oakland is said to be the first car to have a headlight dimming apparatus mounted on the top of the steering column. This lever may be operated by the thumb and without moving the hands from the steering wheel. When the night driving now being done is taken into consideration, the value of such a device cannot be overestimated.

Another innovation, particularly for a car in the low priced field, is the new hand control for spark and throttle mounted on the steering wheel, a type declared to be superior to the quadrant. Gear shifting levers have been lengthened considerably to allow for shifting with minimum effort.

To provide for quick starting, winter and summer, a new improved Marvel carburetor with Oakland manifold has been adopted. This new carburetion system has a heat control working automatically with the throttle, insuring uniform mixture the year round, under all weather conditions. A new Remy distributor, with a semi-automatic advance and retard feature, cares for all spark adjustment inside the breaker box, in place of the entire distributor head moving.

The new steering wheels are considerably more dished than those on the previous models, permitting easy reach of the greatest number of controls now on the steering column.

Each of the models is powered with the Oakland overhead valve engine, built in the Oakland plants, and each carries the 15,000 mile written guarantee, announced for the first time with the 1922 Oakland models.

Special Oakland-built aluminum alloy pistons, oil sealing rings, honed cylinder walls, special bronze-back interchangeable bearings for the engine crankshaft, and silent chain drive are some of the other mechanical features of the latest Oaklands. The lubricating system is of the forced speed and splash system, guaranteeing proper oiling at all speeds and under all conditions.

Drum type headlights add a touch of distinction, and nickelplating is used on the radiator and other parts of the car where it will add most to the appearance. Rear windows and windshield are of plate glass, and in the closed models there is plate glass throughout. Heater, rear-view mirror, windshield wiper and snubbers are supplied in coupe and sedan.

A host of changes have been made and additional equipment placed on the sport car. The body is low and racy, painted light maroon, and upholstered in brown Spanish leather. There are new style, nickeled, drum type headlights, with cowl and tail lamps to match; heavy nickeled radiator, with special radiator cross bar cap and motometer; trunk bars in rear; plate glass wind deflectors; rear view mirror; windshield cleaner; running board shield protectors; running board step mats; disc wheels with demountable rims; walnut instrument board with glass covered, silver faced instruments; khaki top, leather bound; khaki covered windshield visor.

Prices on these new models range from $975 to $1545 at factory.

N. A. D. A. Is Factor in Gas Probe

On request of a Senate committee, the National Automobile Dealers Association ascertained average gasoline prices for 12 months in 28 cities. Wide discrepancies were shown. C. A. Vane, general manager of the N. A. D. A., charged price juggling. "Since then," he says, "there has been a general reduction in gasoline prices of about 2 cents a gallon for practically the whole country. Considering this as a countrywide influence, this means that a saving has been effected for motorists amounting to substantially $75,000,000. Motor clubs throughout the country have quite liberally credited the saving to the N. A. D. A. campaign."

Now the N. A. D. A. is asked for similar data for the same cities for 1920 and the first half of 1921 which, with the information already supplied by the N. A. D. A., will give a check on prices for virtually the last three years.

General Manager Vane has offered the entire facilities of the dealer organization to the Senate committee, and has advised Counsel Roe that when hearings are begun the N. A. D. A. will have witnesses present who will offer additional evidence that an understanding exists in the oil trade amounting practically to a combine to elevate the cost of motor fuel.

Car Goes By Air to Cleveland

An automobile shipped from Detroit to Cleveland by aerial freight was one of the high spots of the first month of commercial airplane transportation between the two cities. The car was a roadster, consigned by Ford to a dealer in Cleveland. It was packed in knockdown form.

Hard times profit him who studies what they show.

Why It's the Good Maxwell

Good All Over—But Let Us Show You Particularly How We Make the Engine, Say Makers

THE assertion, based on belief, backed up by the fact, that a certain product is a good product, is especially well received when the receiver knows the product is not merely good but superlatively good. Knowing that this is so is the reason, no doubt, why the makers of the Maxwell refer to it as the good Maxwell. They hardly would do that and keep on doing it, if they did not feel abundantly warranted.

This is an effort to interpret, to convey correctly, yet briefly, the deep belief of the makers of the Maxwell in the goodness of the most essential part of its being—its engine—which is illustrated on this page. They believe their engineers have done extraordinarily well in developing it with meticulous care, year after year, having in mind its importance in the scheme of co-ordination between all the units which make up a good motor car—one to match much more expensive vehicles, in watchlike precision of manufacture and in quality of performance.

In accounting for the smooth operation at very low speeds, in high gear, and the uniformly low fuel consumption, the makers indicate as outstanding reasons the Maxwell special carburetor, and the Maxwell system of preheating gasoline.

Tracing backward, as it were, observation is directed to the clutch—30 to 40 per cent larger than really required, rugged to the limit, yet infinitely smooth in operation—run in an oil bath and thus protected from grit, and with the main shaft well supported by a roller bearing at the front end and a double-row ball bearing at the rear.

Then the flywheel—made with extreme care and, like the crankshaft, balanced under both dynamic and static tests so as to attain perfect smoothness of action.

The testing machines used to minutely balance the crankshaft statically and dynamically, and in the fine, close balancing of all reciprocating and rotating parts, are of the most advanced type, found only in plants where mathematical accuracy is an unconditional maxim. The result is velvety acceleration, a strong, steady pull at low speeds, and notable absence of noise. Also, the crankshaft is very strong. It is set in three main bearings of unusual size, the front and rear ones ⅞ inch diameter, the center one 2¼ inches; the total of the three bearings actually comprising practically one-third of the active length of the shaft.

The sturdy camshaft also is supported by three bearings which steady the shaft, insure silent valves and eliminate whipping and vibration. The front and rear bearings are 1¼ inch diameter, the center one 2 inches. The quietness of the valves also is due to their being very large, yet finished with minute precision.

As to lubrication, a very simple and efficient system sends a flood of oil, under approximately 10 pounds pressure, through large leads to the three main bearings of the crankshaft, which is literally floated in oil. A spiral gear on the camshaft drives the oil pump. The engine gears are immersed constantly in a flow of lubricant, forced through the specially designed front bearings through the drilled crankshaft. With all this plentitude of oil, yet its consumption is almost negligible.

When all's done except inspection, that process goes beyond the usual degree of inquiry to give the user assurance that every material, every measurement, every assembly, every unit, meets the rigid exactions of Maxwell engineers; and the ultimate proof of this, and which has resulted in the phrase, "the good Maxwell," is the way its quiet mechanism has "delivered the goods" during a number of years.

A Notable Haynes Business Meeting

Kokomo was all cluttered up with folks on September 7. It was the day of the big business sales meeting of Haynes distributors and dealers, several hundred of whom were there. It was an intensive one-day program.

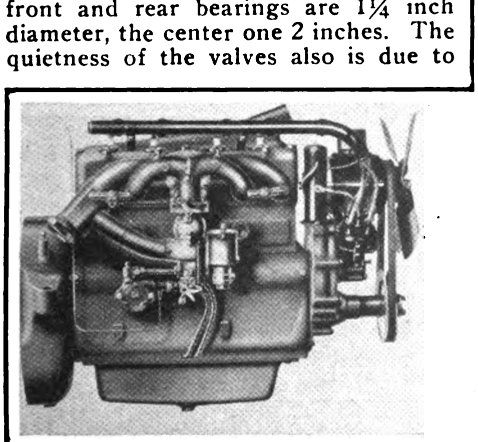
The chief speaker was M. C. Parlin, director of business research for Curtis Publishing Co., publisher of Saturday Evening Post and other famous journals. Mr. Parlin, who in the past year had addressed some of the most impartant business gatherings in the country, used at Kokomo a series of charts relating to this industry.

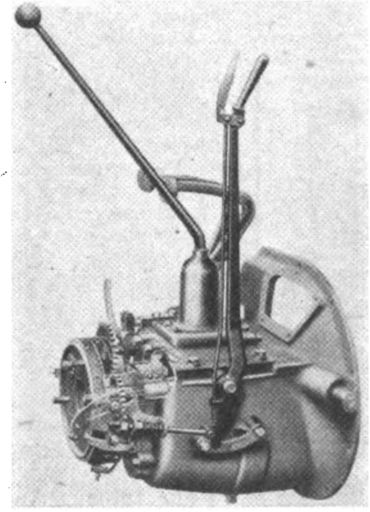
Another notable speaker was William H. Rankin, president of William H. Rankin Co. and eminent advertising counselor. Wilbur D. Nesbitt, vice president of the same company, also spoke. H. A. Groth, merchandising expert, and other worth while experts, helped make the meeting meaty; as did Haynes officials—Alton G. Seiberling, vice president and general manager; Gilbert U. Radoye, director of sales and advertising; and Frank Nutt, chief engineer.

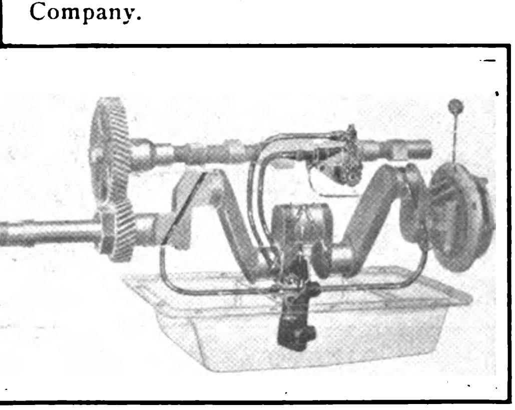
Pullman Makes Motor Car Bodies

The Pullman Co.'s automobile building department is an established functioning part of its great Pullman manufacturing business in Pullman, Ill. It has been building bodies for high class cars several years. Production on both open and closed models is increasing daily. It is now building all bodies complete, including painting and trimming, and on the open models it supplies tops. Its stampings and pressings departments, which for many years have been factors in building Pullman railroad cars, have had their capacity greatly increased through entrance into the automobile business and kindred lines.

We believe the New York Herald has hit it on the head in saying: "It looks assuredly like a winter of country dances and new automobiles."—N. E. McDarby, advertising manager Moon Motor Car Company.







ILLUSTRATING THE ENGINE POINTS RELATED ON THIS PAGE TO BACK UP THE PHRASE "THE GOOD MAXWELL".

Flat Rate System Made Easy

Oakland Booklet, the Result of Years of Study, Simplifies Problem of Repair Charges

THE culmination of years of intensive experimental work in service standardization has resulted in the Oakland Motor Car Co., Pontiac, Mich., sending to every Oakland branch, distributor and dealer in the United States a copy of a booklet entitled The Oakland Flat Rate System, containing the results of these experiments. The object, according to W. R. Tracy, assistant sales manager, is to institute a flat rate system of charges throughout the whole Oakland service organization. The system has been in operation for some time among Oakland branches and distributors, and has given such good results that it is the purpose of the company to extend its use as widely as possible.

The booklet contains descriptions of 43 operations, detailed step by step. The time required for each operation is given, but not the cost of labor, because it varies in different communities. Within another month description of additional operations will be sent out to the dealers, to place in these books, and from time to time other operations will be added.

R. A. Armstrong, manager of the service department of the Oakland Co., states that these outlines of operation enable the dealer to pre-determine the cost of repairs, and to tell the car owner, after inspection of his automobile and before actually doing the work, what repairs are needed and what they will cost. The records assist dealers in the small towns in placing their repair departments on a basis of operation equal to the distributing organizations in the large cities, and permit them to fill a demand that is growing constantly in the minds of all automobile owners.

The time specified for each operation is based on actual time-study of each operation, as performed by a mechanic of average ability and with the ordinary socket wrenches and tools found in most dealer repair shops. By multiplying the time required by the labor rate per hour, the dealer ascertains the flat rate charge. By adding the charge for materials the total charge is obtained.

The thought back of the whole proceeding is that "he who serves best profits most."

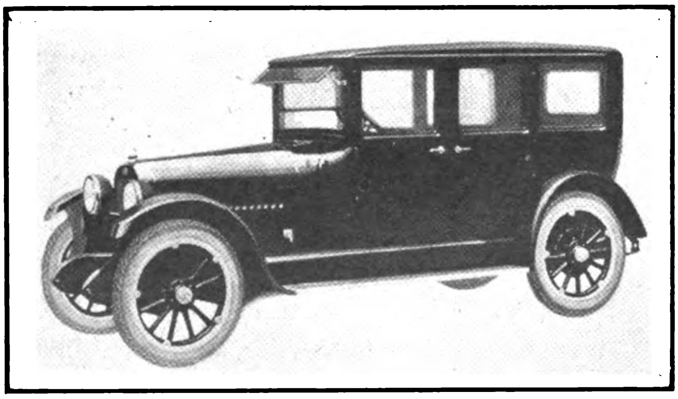
New Timken-Hyatt-New Departure Plan

Bearings Service Co., as an organization, will be dissolved December 31, 1922, says Alfred K. Hebner, president and general manager. The company was incorporated in June, 1916, and will have completed 6½ years by December 1, being the concern acting through 32 direct branches and approximately 1000 distributors as the service department of Timken Roller Bearing Co., Hyatt Roller Bearing Co., and New Departure Mfg. Co., for the service distribution of Timken, Hyatt and New Departure bearings. After October 1 the servicing of Hyatt and New Departure bearings will be handled by United Motors Service, Inc., and a new company to be known as Timken Roller Bearing Sales and Service Co. will care for the servicing of Timken bearings. The separation is deemed desirable, Mr. Hebner states. The Hyatt and New Departure companies are units of General Motors Corp. Until January 1, 1923, when Timken Roller Bearing Sales and Service Co. will be in operation, the Bearing Service Co. will continue the servicing of Timken bearings.

United Motors Service, Detroit, now represents the factories for service on Delco and Remy starting, lighting and ignition systems and Klaxon warning signals, and sales and service of Harrison radiator cores, Jaxon rims and wheels, and A C speedometers. While Hyatt roller bearings and New Departure ball bearings are listed as new lines by the company, they do not represent an entirely new activity for either the management or field personnel, it being pointed out that R. S. Lane, president of United Motors Service, was for 7 years chief engineer for the motor bearings division of the Hyatt Co. and subsequently for 4 years was president of Bearings Service Co.

United Motors Service was incorporated in October, 1916, and now operates through 21 direct branches and approximately 4000 distributors and dealers. This company is the national sales and service organization for the General Motors products mentioned.

As one or more of the products listed are said to be used on every motor car, this addition of Hyatt roller and New Departure ball bearings by United Motors will make its branches even more convenient than formerly, as sources of supply for motorists and dealers.



NEW NASH 5 PASSENGER 6 CYLINDER SEDAN, BUILT ON THE NASH 121 INCH CHASSIS, WHICH WENT INTO PRODUCTION RECENTLY AND WHICH WAS DESIGNED TO MEET WIDESPREAD REQUESTS FOR SUCH A CAR.

A Million Motor Campers in 1921

One department of travel in which there is little need for worry is that of vacation trips. The use of the motor car for holiday tours is gaining constantly. More than a million persons went motor-camping last year. More than 300 cities now have municipal camp sites. There are many additional moderate priced commercial camps for motorists, and large areas for this purpose in the national parks and forests.

The automobile tourist registration in the national parks for the 1921 season will give an index of the popularity of motoring as a vacation:

Hot Springs	Middle Arkansas		
Yellowstone	Wyo., Mont., & Idaho	14,736	54,747
Sequoia	Middle East Calif.	7,001	26,101
Yosemite	Middle East, Calif.	18,947	64,566
General Grant	Middle East Calif.	6,545	28,626
Mount Rainier	West Central Wash.	12,271	55,771
Crater Lake	Southern Oregon	7,892	26,176
Wind Cave	South Dakota	9,078	27,236
Platt	Southern Oklahoma	2,980	10,000
Sullys Hill	North Dakota		
Mesa Verde	Southwestern Colo.	651	2,042
Glacier	Northwestern Mont.	2,614	7,977
Rocky Mountain	North Middle Colo.	30,264	120,388
Lassen Volcanic	Northern California		
Grand Canyon	North Central Ariz.	5,104	15,831
LaFayette	Maine Coast		
Zion	Southwestern Utah	604	2,257
Other Nat. Parks		33,563	127,544
	Total	152,250	568,612

The figures are from the report of the Director of the National Park Service, 1921. They do not include the hundreds of thousands visiting national forests and state parks and forests. Rocky Mountain Park's showing is helped by its being near Denver.

The Indiana Automobile Trade Association is trying to have all automobile sales agencies closed Sundays.

Japanese Motorists Walk

Land of Rising Sun Due to Be a Dull Market this Year, for Reasons Partly Preventable

THAT the present market for automotive vehicles in Japan is poor and in all probability will continue to be so during this year is the opinion of most dealers in Tokyo, says Automotive Trade Commissioner Irvine, in a report from that city to the Department of Commerce, Automotive Division.

The chief contributing factor to this condition is the business depression in Japan, which has not only seriously curtailed the sale of new vehicles but has caused owners to put up their machines. The use of passenger cars has been discontinued because of the high cost of operation. A sufficient volume of freight and the lack of demand for quick delivery does not warrant the use of trucks.

The situation is further complicated, from an automotive viewpoint, by the large number of unsold vehicles. A careful survey among the dealers reveals that there are at least 750 passenger cars and 250 trucks unsold. Nearly all of these were purchased prior to the price reductions made during the past 12 months in the United States. Dealers tried to maintain prices for more than a year but market conditions did not warrant such action. The vehicles have remained in government warehouses in most cases in order to defer paying the duty charges, ranging from 25 to 35 per cent ad valorem.

Dealers are now cutting their prices in order to meet the demands of the banks which financed the imports, and both passenger cars and trucks are being offered below cost, without much success. The accumulated charges from insurance, storage charges, and interest, averaging about 9 per cent on capital invested in the unsold cars, results in a high selling price, about 100 per cent above American prices. With but few exceptions Japanese dealers claim to be running business at a loss or to be just breaking even. These claims seem reasonable, especially with large dealers, on account of the large overhead represented principally in the large work shops built during the boom period for service and body building.

Another factor operating to the disadvantage of American cars is the high tax rate in Tokyo, the center of the automotive trade in Japan. The taxes there are the highest in the world at the present time, and are levied on the unsound and impractical theory of horsepower, based on the cylinder bore. As American cars generally have wider cylinders than those of European make they fall in the highest tax calsses. The formula used for determining the horsepower by the taxing authorities is: Square the bore, multiply by the number of cylinders and divide by 3. This places the cheapest American car in the same class as the highest priced European make.

Gasoline Is Averaging Better

Results of the semi-annual motor gasoline survey by the United States Bureau of Mines indicate that the average gasoline sold in the country is of better grade than heretofore. Laboratory tests of motor gasolines sold in New York, Washington, Pittsburgh, Chicago, New Orleans, St. Louis, Denver, Salt Lake City, San Francisco and Bartlesville, Okla., in July showed this year's gasoline is much more volatile than that sold two years ago, and that it has a somewhat better distillation range than last summer's samples.

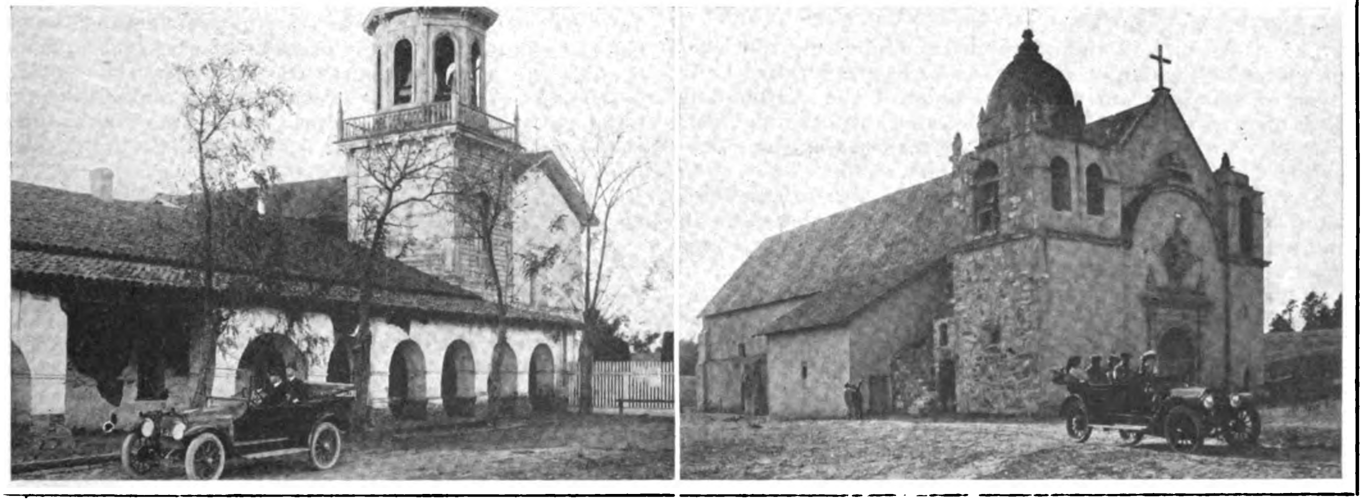
Increase in volatility means an increase in rapidity and intensity of explosion. It means that the "old bus" will be easier to start on a snappy December morning. It means also less carbon to clog the cylinders.

A comparison of the average figures compiled by the Bureau of Mines during the past several years shows that motor gasoline is also becoming more uniform in character. The large seasonal change is disappearing, but "winter gasoline" still has a lower initial boiling point than "summer gasoline." This difference in volatility is made intentionally, to facilitate starting the motor in cold weather. The end point shown in the present survey is slightly lower than that of last winter and of the summer of 1921.

The average of the entire country, considered as a whole, does not show much change from a year ago, but samples from individual cities show some distinct changes. Of 132 samples collected by the Bureau of Mines in the present survey, 10 failed to meet Federal specifications as regards the initial boiling point of 140 degrees F., and 61 samples failed at the 90 per cent (374 degrees F.)

The survey just completed is the sixth made by the bureau. Detailed figures giving the results of the survey in each of the cities named appear in Serial 2388, which may be obtained from the Bureau of Mines, Washington, D. C.

Railways are getting 7500 new automobile cars.



AS YOU MOTOR UP EL CAMINO REAL, STOP AT THE MISSIONS—THEY ARE WELL WORTH WHILE.

The mission shown at the left in the picture is San Juan Bautista, 87 miles south of San Francisco, in San Benito County, Calif., and in the valley of the river, San Benito. Some of the missions are but mounds of soil. San Juan Bautista is the best preserved. Its collection of vestments is remarkable, and it is known more than any other for the soft tones and perfect harmony of its nine chimes. These sweet-voiced bells were cast in Peru by a master workman. They still call worshippers, and soften the souls of those who pass by. At the right is shown Carmel Mission, formerly called San Carlos Borromeo, near Monterey and Del Monte. This was visited in 1920 by many delegates to the Del Monte convention of Automotive Equipment Association.

Average Buyer Is Analyzed

Owner of Better-than-Cheapest Car Is 34 Years Old, Buys on Time, Has Bank Account, Insures

WHO is the average motor vehicle buyer? A hard question to answer, because it very nearly parallels the query, "Who is the average citizen?" Yet composite pictures of the motor vehicle buyer are not lacking. Probably the best statistics on the buyer in existence are those gathered by the great acceptance corporations which annually finance millions of dollars' worth of time payment sales, and that consider the automobile borrower the safest risk they ever lent money upon.

One of these concerns, the Metropolitan Securities Co. of Cleveland, O., has supplied the National Automobile Dealers' Association with an analysis of 2500 sales financed by it, selected at random from transactions handled up to May 15, 1922. Ford sales are not included in the list, because this particular survey was requested to get a picture of buyers above the Ford class.

This average purchaser has a net equity in real estate of $4286.08. He has a net equity in personalty of $2079.38. He has a definite monthly income of $349.70. He purchases a car averaging $1361.96 in cost, on which he pays down $698.31. He agrees to pay the balance, $663.65, in monthly installments of $95.60.

This average buyer is 34 years old. Seventy-four per cent of this number are married, 82 per cent have bank accounts and 69 per cent carry life insurance.

Of the transactions handled by the Metropolitan Securities Co. between January 1, and June 1, 1922, 65 per cent of the purchasers had owned a car before, and 45 per cent of that number had purchased cars on time.

"Based on our experience of more than five years," says this company, "notes arising out of the sale of low and medium priced passenger cars and light delivery trucks are the most satisfactory."

Dyer Law Doing Much Good

American Automobile Association reports that 2120 automobiles, worth $2,567,208 at a fair second-hand valuation, have been recovered by the Bureau of Investigation, United States Department of Justice, since passage of the Dyer anti-theft law in October, 1919. The Department has investigated 2391 cases, which involved 4385 persons. There were 2773 persons arrested, 1533 indicted, 1113 convicted. Conviction sentences aggregated 2356 years, 6 months, 11 days, and fines totaled $41,140.

The A. A. A. took an active part in supporting the Dyer anti-theft bill, which was prepared by Representative L. C. Dyer of Missouri, an active member of the Automobile Club of Missouri, and who was assisted in obtaining facts necessary for the preparation of the measure by the Automobile Club of Missouri and the A. A. A.

Any doubt as to the need for such a measure is dissipated by the figures, which show a material reduction in the percentage of cars stolen since the law went into effect.

Credit for the enforcement of this law, which has resulted in such a large percentage of arrests, is largely due to William J. Burns, head of the Bureau of Investigation. He has given especial attention to automobile thefts, realizing their extent.

The outstanding feature of the Dyer law is the fact that it makes interstate transportation of stolen motor vehicles punishable in Federal courts. Before its passage there had been built up a great and growing traffic in stolen motor vehicles, conducted by bands of unscrupulous men who maintained assembling factories at various points and who, through their ability to transpose parts of various machines, one to the other, were able to so alter a car as to make it practically unrecognizable to the original owner. State laws were inadequate to reach these men.

Officials of the A. A. A., Federal officials and heads of other organizations are trying to induce motor car makers to permanently mark all automobiles so as to make identification easier.

How Mob Madness Is Started

Under the influence of mob insanity, it takes the average person about 30 seconds to throw off the mask of civilization and revert to the lowest form of savagery. The other day in Cleveland, an automobile driver speeding 50 miles an hour through congested streets was pursued by motorcycle police. Other motor car drivers joined in the chase, like small boys chasing the fire engine. By the time the reckless man was arrested on a charge of driving while intoxicated, the pursuing cars numbered 50, and there were cries of "Lynch him!" There might really have been a lynching if the chase had been longer and no cops were present. Something like this explains what happened at Herrin.—Cappers' Weekly.

More than a Million On Strike

Recent Labor Department news was that about 1,228,000 workers are striking against wage reduction: Bituminous miners, 573,000, out since April 1; anthracite miners, 155,000, out since April 1; textile workers, chiefly in New England, 80,000, out since January 1; rail shopmen, 400,000, out since July 1; minor strikes, 20,000. Approximately 9,000,000 hours of work are being lost per day. Averaged as low as 50 cents per hour, that means $4,500,000 a day or $145,000,000 every 30 days. Some part of that, if earned, would be spent for automobiles and other automotive products.

Single-Seat Closed Cars Popular

An evidence of the popularity of the single-seat, closed car for business and general purposes, was a recent driveaway of 60 Chevrolet Utility coupes from the Flint factory. The cars were all assigned to the Detroit territory. C. E. Dawson, Michigan sales manager of the company, says dealers in all sections of the country are ordering more and more of these cars, as they have made an exceptionally favorable appeal to business houses and professional men, due to the all-weather protection and fine appearance of their Fisher bodies and complete equipment.

World's Motor Car Registration

World automobile registration has reached 13,000,000, according to Akron chamber of commerce figures up to June 30. Next to the United States, Canada and the British Isles show the largest number of cars in use, Canada leading the mother country by only 248. The table reveals that every country except Austria and Russia registered an increase in cars during the three years, 1919 to 1922. Russia dropped from 15,000 to 10,000, and Austria from 19,300 to 10,474.

Parked Too Far from the Curb

"Your Honor, it is true that the policeman found me sleeping in the gutter, but I was not intoxicated."

"Very well," replied Judge Gordon, "I fine you $10 for parking more than six inches from the curb."—Los Angeles Record.

Norwegian Boy's Essay on the Frog

What a wonderful bird the frog are!
When he stand he sit, almost;
When he hop, he fly, almost;
He ain't got no sense, hardly;
He ain't got no tail, hardly either.
When he sit, he sit on what he ain't got, almost.

—Pacific Mutual News.

Highway Matters

To Award Valuable Scholarship

Names of judges appointed to award the four-year university scholarship offered in connection with the national good roads essay contest have been announced by the Highway Education Board, Washington, D. C. They are Henry C. Wallace, Secretary of Agriculture; George Horace Lorimer, editor of Saturday Evening Post; and Dr. John Grier Hibben, president of Princeton University.

These gentlemen accepted at the invitation of Dr. John J. Tigert, United States Commissioner of Education. who also is chairman of the board. They have been supplied with copies of 54 essays, representing each state, as well as the District of Columbia, the Canal Zone, the Philippines, Porto Rico, Hawaii and Alaska. Selection of the best essays, out of the thousands written, was made by leading educational institutions, such as a state university, or the state department of education.

It is estimated by officials of the board that at least 250,000 pupils of high school grade participated in the contest, and these 54 manuscripts, therefore, represent the cream of all papers presented. Essays were written on the subject, How Good Roads Are Developing My Community. In many states local prizes were given, as well as state prizes by the institutions conducting the contest.

The scholarship offered is given by H. S. Firestone, Akron, O., a member of the Highway Education Board. It is intended to defray tuition and all reasonable expenses of the student in college and is valued at not less than $4000. The successful student, to be selected by the judges, may attend any college or university in the United States. The scholarship is the greatest of its kind offered in the United States, and is given annually for the best essay on a subject pertaining to good roads.

Philippine Sales Drop, Recover

The year 1921 saw a decrease in the sale and operation of motor vehicles in the Philippines, but the first quarter of 1922, according to dealers, shows some improvement, says District Office Manager Logan, Manila, reporting to the Department of Commerce. There were 1865 new motor vehicles registered and 11,476 re-registered during 1921, making a total of 13,341 compared to 13,493 in the previous year, a reduction of 152.

A considerable number were out of operation due to the high price of motor fuel, high wages of drivers, heavy charges for repair work, and bad condition of streets and highways on account of the government's retrenchment policy. Road maintenance now is receiving more attention in the cities and provinces.

There are approximately 6000 miles of roads in the Philippines, about 4000 miles being of first or second class construction and suitable for motor traffic. At the close of 1921 there were 16,859 licensed drivers of motor vehicles in the Philippines.

Motor Vehicles in Panama and the Canal Zone

The comparatively large number of motor vehicles in use in the Republic of Panama and the Canal Zone is due principally to activities connected with the Panama Canal, also their extensive use for hire in Panama City and Colon and the adjacent sections of the Canal Zone, says Consul Orr, Panama, in a report to the Department of Commerce. The official registration in the Republic of Panama is given as 731 passenger cars, 59 trucks and 23 motorcycles. In the Canal Zone there are 1323 passenger cars and motor trucks combined (the number of each about equal) and 369 motorcycles. Official cars make up 658 of the Canal Zone registration and are owned by the Panama Canal, the Panama Railroad, and the United States army and navy. Hardly more than 10 of the total registration are not of American make.

Small Garages Important in China

In Shanghai the numerous small garages run by Chinese have taken care of the second hand car problem by buying up all such cars and letting them out to their native patrons, the Department of Commerce is informed by the consulate there. The Chinese are fond of motoring, and these small garages bring it within their means and thereby lay the basis for a future market.

The motor car market in Shanghai is showing signs of recovery, according to dispatches from Trade Commissioner Hoyt. The representative of one of the largest automotive manufacturers in the United States has reported that late sales have been better than any time in the past 8 months, which is particularly encouraging as business has been dull in all lines. The greatest demand, he reports, is for medium priced passenger cars.

A Japanese Electric Cycle Car

In August the Department of Commerce said the first Japanese automobile, the Jitsuyo, designed by an American, and being produced at Osaka by Jitsuyo Jidosha Co., at the rate of 50 per month, is a 2 cylinder, 3 wheeled, air cooled car capable of 30 miles an hour.

Now Consul Dickover, at Kobe, reports an electric one-seat cycle car, also being made in Osaka, eligible to popularity on narrow Japanese roads owing to its compactness and alleged economy. Only a few have been seen yet. It has a 1½ horsepower electric reversible engine, chargeable by ordinary current through a transformer. It is assembled from parts mostly made in Germany. Parts of the body are made in Japan. It is covered by German and Japanese patents.

Number of Cars in Chihuahua Doubled

In spite of the general depression and lack of good roads in the Chihuahua district, the 650 passenger automobiles in use at the end of June, 1922, exceed the preceding year 100 per cent. Consul J. B. Stewart says this is due to settled political conditions and to the establishment by an American firm of the first automobile sales agency using American methods, by means of which prospective purchasers are enabled to obtain their cars without making a special trip to the United States. Sales of low priced, light motors have greatly outnumbered all others, but there has been a decided tendency during the past six months toward heavier, higher priced cars.

Railway Motor Cars in Victoria

The railway authorities in the state of Victoria, Australia, are about to use railway motor cars, having in mind the low cost, says a report from Consul General Sammons, Melbourne. The first car is a 5 ton motor truck chassis built by the A. E. C. Co. of England, which has been rebuilt to carry 43 passengers and haul a trailer with capacity for 12 passengers and 2 tons of freight, at a speed of 25 miles per hour.

New Prices on Anderson Cars

Effective August 24, Anderson Motor Co., Rock Hill, S. C., reduced prices on 8 models by from $155 to $455. The new prices are: 5 passenger touring, $1495; convertible roadster, $1495; 7 passenger touring, $1595; 4 passenger sport, $1595; 2 passenger speedster, $1785; 4 passenger ultra sport, $1945; 4 passenger coupe, $1995; 5 passenger sedan, $1995; all with cord tires, and all plus war tax.

Ford Improved in 31 Ways

Ford touring cars have been improved by means of a gypsy-type one-man top, better seats, better finish, radiator springs, one-piece spring hangers, improved steering gear, and so on—31 improvements in all.

IN FOREIGN FIELDS

Westinghouse President on Europe

The condition of the automobile industry in Europe presents a striking contrast to the unprecedented prosperity here, according to D. F. Crawford, president of Westinghouse Union Battery Co., who returned recently from an extensive European trip made in the interest of the various Westinghouse air brake interests.

Germany is making the greatest advances among the states of Central Europe, and its motor car registration equals the previous high mark of 1914, Mr. Crawford reports.

"The Italian automobile manufacturers are suffering a slow-up in production," he said. "The war popularized the use of motor trucks, and with an improvement in business conditions there will be a large market in Italy for commercial vehicles.

"In France there has been introduced a measure to repeal the luxury tax on motor vehicles selling for less than 15,000 francs, which if passed will increase the demand for both passenger cars and trucks.

"Great Britain has gone through a lock-out in the engineering trades. It ended in June. The industry suffered considerably but is gradually picking up.

"A high class American automobile laid down in Poland would cost 20,000,000 Polish marks, and there are not many individuals in Poland who are in the market at that price.

"Industries in this country in all lines seem to be more prosperous and on a firmer basis than abroad, although it was my observation that foreign manufacturers are on the road to improvement."

While in Rome Mr. Crawford attended the International Railway Congress as one of the accredited representatives of the United States Government.

Fine Booklet on Transport Problems

Fundamental problems involved in highway transport and highway economics are discussed at length by leading students from engineering and automotive fields, in a new booklet now ready for distribution by the Highway Education Board, Willard Building, Washington, D. C.

Modification of truck design to fit the road, subsidizing highway transport by constructing market lanes, predictions of future traffic changes, and economical types of roads, are only four of nearly two score problems raised and discussed authoritatively in the bulletin.

In addition, a chart of the field of highway research, prepared by Dr. W. K. Hatt, formerly of Purdue University, now director of highway research for the National Research Council, forms an instructive and suggestive part of the brochure.

The booklet itself is a report of a conference at University of Maryland, attended by leading economists, engineers and manufacturers. It was edited by Prof. C. J. Tilden, who was director of the Highway Education Board when it was known as the Highway and Highway Transport Education Committee. After a year's leave of absence he has returned to Yale University, where he is professor of engineering mechanics.

Due Mainly to Federal Aid

Federal aid probably has been the most important factor in the big boom in highway building of recent years, and there are now many long stretches of trunk line highway, serving rich agricultural and industrial sections of the country, which are almost entirely Federal aid construction. The Department of Agriculture, which administers the Federal aid fund through the Bureau of Public Roads, points out that a traveler going from Richmond, Ind., to St. Louis across Indiana and the southern part of Illinois, thence to Chicago by way of Springfield and Peoria, approximately 679 miles, would travel 505 miles or 75 per cent of the way, on Federal aid highways, practically all of which should be in service by the end of the present season.

To Solve a Bridge Problem

A model of a reinforced concrete arch bridge 7 feet long has been constructed by the Bureau of Public Roads, to determine just how masonry art bridges should be designed when built on a skew. A skew bridge is one in which the roadway is not perpendicular to the abutments, as when a bridge crosses a stream diagonally.

It has been found that the stresses on a skewed bridge are considerably different from those in a bridge of the same span built perpendicular to the abutments, and failures have occurred because this was not taken into account in the design.

The problem is so complicated that engineers of the bureau wish to check up their theoretical conclusions by making a faithful reproduction of a bridge, using similar materials and of such size that it can be tested in the laboratory. Loads will be applied to the model, and the stresses at various places calculated from measurements of the lengthening and shortening of the concrete surface taken with very precise instruments, as well as by other methods.

Coal Embargo Bad for Highways

Unemployment on an increasingly large scale and resultant economic disturbances, together with impassable roads in many sections the coming fall and winter, will result from coal embargoes, in the opinion of state highway officials, who are making reports to Washington. The report shows that from 500 to as many as 25,000 men engaged in road work in different states are in danger of losing employment, and with heavy financial loss to contractors.

Argentina's First Roads Congress

Argentina's first national good roads congress was held in Buenos Aires in July. It was decided to formulate plans for a network of roads throughout the republic. Some job; but the United States once was confronted by a similar one. It isn't finished, but is on its way.

Davis Car Additions at Same Price

Added refinements and extra equipment, which will be standard for the Davis model 71 phaeton and model 74 sedan, are announced by George W. Davis Motor Car Co., Richmond, Ind. There will be no increase in the price of these models.

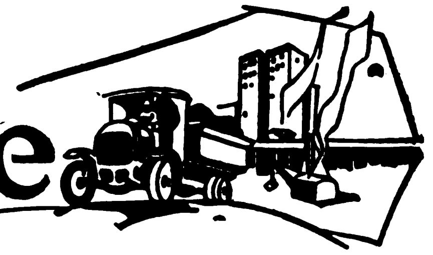
The phaeton, a 5 passenger touring car, is finished in either Midnight blue or Royal blue, at buyer's option, and equipped with either aluminum military steps and skirt fenders, or with regular running boards. Snubbers, both front and rear, heavy polished aluminum luggage rods on the rear body panel, front bumper, and brown Spanish leather upholstery are now standard on this model.

The sedan now is equipped with snubbers, front and rear, and front bumper. Military steps, skirt fenders and luggage rods always have been standard on this model.

American Guaranteed for 25,000 Miles

Analysis of claims for defective material in a period of years, says President Carl H. Page of American Motors Corp., Plainfield, N. J., showed they averaged less than one-sixth of 1 per cent, or only $3.24 per car; and improvements warrant, he says, a 25,000 mile guarantee on the new series of American open and closed models. These have a larger motor (3½x5), said to give 20 per cent more power; and special equipment such as dash clock, cowl lights and ventilators, tonneau light, windshield wiper and inside mirror. List prices have been reduced from $70 on open cars to $210 on closed models, including equipment.

The Car of Commerce



Railroad Commission Control

MUCH motor transport opposition has been voiced against an amendment of the electric railway franchise provisions in California, proposed by California Real Estate Association. Los Angeles' city council opposed it. From statements by a lawyer employed by motor transport interests operating in a large way, it appears they favor the amendment as a protection against fly-by-night competition. Motor West has called attention to the "indeterminate" feature. The real estate association's interest in the matter has puzzled many. Some have said the real estate men are opposing motor transport, a great developer of real estate activity, and thus injuring their own interests. The proposed amendment is printed below, and official explanation of the real estate association's attitude follows it.

—

Electric railway franchise amendment proposed by the California Real Estate Association: Article XII. Section 23c. Exclusive power is hereby conferred upon the Railroad Commission (a) to grant franchises, determinate or indeterminate as to time, for the construction and operation of street, interurban and suburban railways, and for the operation of motor vehicles for the transportation of persons or property for compensation upon the public streets and highways; (b) to prescribe the terms and conditions of such franchises, provided, however, that rates and fares charged thereunder shall at all times be subject to regulation by the Railroad Commission; (c) to accept the surrender of all such franchises granted by it, and of all such franchises heretofore granted.

In proceedings for fixing rates and fares and for taking property under the power of eminent domain for public use by the state or any municipality or other political subdivision thereof, franchises granted pursuant to this section shall be deemed to have no pecuniary value; and all such franchises shall terminate as prescribed by the Railroad Commission and, in any event, upon the acquisition by the state, or any municipality or other political subdivision thereof, of the property owned or operated thereunder.

The acquisition, ownership, operation and management of public utilities by the state, or any municipality or other political subdivision thereof, shall be governed as now or hereafter provided by law, notwithstanding the provisions of this section.

—

Guy W. Wolf, director of research of California Real Estate Association, 85 Second St., San Francisco, writes as follows:

Editor Motor West:—In your issue of July 15, under the heading "Railroad Commission Control Idea," you stated that the indeterminate franchises for electric railways "would enable them to forever stop motor transport 'interfering' with their lines, or to monopolize any such transportation of passengers and freight."

The California Real Estate Association is not interested in furthering the financial fortunes of the electric railway companies except insofar as there is a direct connection between the financial condition of the company and the quality and quantity of service it delivers. We want better transportation and under present conditions we have been unable to get it and have no prospects of getting it.

Without going into the question of the effect of this measure on competition between motor transport companies and electric railways other than to refer you to the established policy of the Railroad Commission in refusing to permit costly competition in any field of public utility service, I would like to point out that this measure will place beneath the present unstable motor vehicle transportation business in California a foundation that it does not now have.

If the financial reports of the motor transport companies are to be taken at their face value, there is no money today in that business. A careful study of the reports for the year 1921 to the Railroad Commission bears this out.

An inquiry into the causes for that deplorable situation would be most instructive, and I believe one of the causes would be found to be the fact that under the present method of management and control the entire assets of a motor transport company do not provide a sufficiently sound basis for financing of extensions.

The California Real Estate Association believes that motor transportation is here to stay, and it believes that within a few years, under present conditions, the motor transport companies will be in the same financial situation that now faces the electric railways, i. e., a deterioration of service, leading to inevitable bankruptcy.

I take exception to your inference that the indeterminate franchise is a perpetual franchise. Our amendment expressly provides that franchises shall terminate on the acquisition of a transportation company, whether electric or motor, by a municipality. The indeterminate feature permits a company to eliminate the writeoff charge and thus either charge a lower fare or place the additional funds in the net operating income, if there is any.

In the interest of the public, any operating charge that can be legitimately removed from the shoulders of a transportation company results in either better service or lower fares, and we must remember that all transportation companies, of whatever nature, in the last analysis depend upon the public for their existence and income. As we view it, the obligation of a transportation company to the public is paramount and transcends its obligation to the owners or bondholders. On the other hand, in return for good service the public is obligated to permit the company a fair return on its invested capital.

Upon this simple principle of service and a fair return for that service must be based any plan for giving California permanent adequate transportation.

Our amendment offers the possibility that this principle can be established, and that it will benefit motor transportation companies equally with electric railways.

We feel that after this amendment has been studied by the motor transport people of California they will all be in favor of the principle and will lend their support to it. There is no reason why a permanent transportation utility in California should fear the regulatory powers of a state body, but there is every reason why the motor transport companies, as well as the electric railway companies should face the future without confidence so long as they are subject to those forms of local regulation and control which have bankrupted the older electric railways and which are watching for every opportunity to place regulations and restrictions on the newer motor vehicle companies which will bring them inevitably to the same unhappy end.

A motor stage line on the Rainbow Route, between Grand Junction and Montrose, Colo., competing with the Denver & Rio Grande Railroad, was authorized recently.

Trucks as Strike Peril Aids

Motor Transport's Surprising Present Feats and Great Elasticity if Needed Told in Figures

SO much of the food supply of our big cities is being hauled by motor truck that a rail strike need not cause serious shortage in basic commodities. The function of the truck is that of a carrier for short hauls and as a feeder to rail lines. In an emergency, however, its usefulness can be elastic to cover the special situation.

The degree to which certain products normally are hauled by motor truck is indicated by the following table:

City	Commodity	Daily-Consumption	Normally by Truck
Cincinnati	Milk	190,714 qts.	97 per cent
Kansas City	Milk	157,058 qts.	40 per cent
Kansas City	Eggs	303,223	65 per cent
Kansas City	Potatoes	12,913 lbs.	50 per cent
Philadelphia	Milk	667,550 qts.	64,169 qts.
Atlanta	Milk	95,357 qts.	90 per cent
Atlanta	Eggs	148,385	60 per cent
Atlanta	Potatoes	7,840 lbs.	60 per cent
Indianapolis	Eggs	303,223	60 per cent
Indianapolis	Milk	168,823 qts	80 per cent
Indianapolis	Potatoes	12,854 lbs.	68 per cent

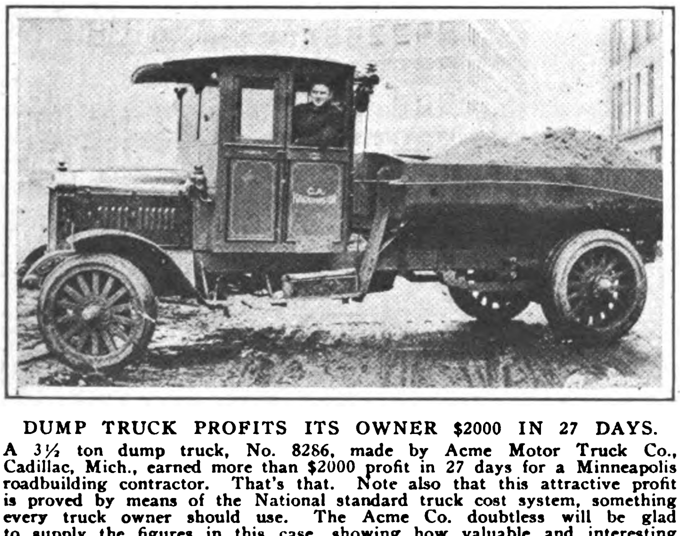
Adequate supplies of food for all major industrial centers can be supplied by the 1,000,000 motor trucks in the country today, in the event of further suspension of railroad service. Surveys just completed in New York, Philadelphia, Cleveland, Detroit, Kansas City, Indianapolis, Atlanta, Des Moines, Louisville, Omaha, New Orleans and Baltimore indicate full protection of supplies.

The Post Office Department is prepared to keep moving all first class and paper mails with a fleet of 23,000 trucks. Service already has been inaugurated in Indiana.

In another place, where a portion of the letter box collections and parcel post delivery service was motorized, 95 ⅜-ton trucks operated by 152 letter carriers and 17 carriers on foot have superseded 240 horsedrawn wagons driven by an equal number of letter carriers. This was done at a saving exceeding $30,000.

Medicinal supplies and other drug necessities will not be affected directly. The Louis K. Liggett Co. for some time has had a large fleet of trucks in service and is making trips to its various branches in Connecticut, New Jersey and cities near New York.

Tom Snyder, secretary of the Indiana Transfer and Warehousemen's Association, believes that with a complete tieup of railroads the distribution of food products in Indiana could be fully taken care of by motor transport. About 30 days' supply of all common food products is now in storage in the various commercial warehouses.



DUMP TRUCK PROFITS ITS OWNER $2000 IN 27 DAYS.

A 3½ ton dump truck, No. 8286, made by Acme Motor Truck Co., Cadillac, Mich., earned more than $2000 profit in 27 days for a Minneapolis roadbuilding contractor. That's that. Note also that this attractive profit is proved by means of the National standard truck cost system, something every truck owner should use. The Acme Co. doubtless will be glad to supply the figures in this case, showing how valuable and interesting the system is, to anyone asking for them.

It is estimated that the trucks operating out of Louisville will be handling soon 500 tons of supplies both on the outbound and inbound trips. Under normal conditions the trucks and interurbans handle 75 per cent of all perishable foodstuffs in Kentucky and Southern Indiana.

Standard Oil Co. of New Jersey now is transporting barrel package goods from its refineries to its warehouses by truck instead of by rail. This will insure, in part, sufficient gasoline supplies.

The meat packing industry will not be materially affected, as 2500 head of hogs are hauled daily by trucks into the St. Joseph, Mo., stockyards. Fifteen motor express lines for handling livestock shipments within a radius of 45 miles of Kansas City have been established for some time.

Growing Up with the GMC Truck

While the automobile industry is as yet, relatively, in its infancy, there are 334 persons in the employ of the General Motors Truck Company, of Pontiac, Mich., who have a total record of 1840 years of service with that organization.

Among those in the accounting department are six persons who have a total of 32 years of service to their credit; in the engineering department, eight with a total of 55 years; in the cost division, four with 11 years; advertising department, three with 24 years' service; billing department, two with 17 years; production department, seven with 27 years; purchasing department, seven with 41 years. There are 15 foremen and superintendents who have been with the company a total of 131 years; in the experimental department there are four with a total of 17 years; in the miscellaneous departments, three with a total of 20 years; and in the factory there are 275 employes with a total of 1375 years service.

While the record made in the various departments are not anywhere near as high as those made in other lines of long established business houses, the truck factory executives feel that the percentage is extremely high when it is remembered that the industry is less than 20 years old.

Results from Civility Campaign

Greater civility on the part of the 1,000,000 motor truck drivers in this country from now on is expected by reason of the excellent response to the educational campaign of the National Automobile Chamber of Commerce motor truck committee. The pamphlet being used in the campaign, Common Sense on the Highway, already has reached a circulation of 125,000 copies among truck manufacturers, dealers and fleet operators. Additional copies are requested daily from some of the largest truck users, who comment in highly favorable terms and show a keen desire to stimulate interest among drivers. The pamphlet is illustrated by cartoonist Clare Briggs, who shows in his inimitable style that courtesy is as cheap as the air, and why drivers should move to the right to accommodate faster moving vehicles.

General Business Creates Truck Demand

Alfred Reeves, general manager of National Automobile Chamber of Commerce, says: "There has been a steady increase in the number of trucks made and sold, particularly those of the lighter type. This indicates improvement of general business and its need for increased transportation facilities.

"There is a broadening field for motor buses. In some cases they are being taken on as feeders for electric lines, and enterprising railroad officials are taking the truck as an ally of the main lines, with particular reference to short haul business and store door delivery."

What the boss doesn't know won't hurt him, but it will hurt you.

General Motors Trucks

The rapidly increasing number of GMC trucks that are being registered for license in the various states is tangible evidence of the business growth that is being enjoyed by the retail representatives of these quality motor trucks.

Each new report shows a very creditable gain in all sections of the country. This undoubtedly is due to the remarkable value of GMC trucks and to the fact that they contain exclusive features—long desired by motor truck owners and now obtainable only in GMC trucks.

These features—the high quality of these trucks and the value which they offer motor truck users all contribute to the profit of the dealer, fortunate enough to possess a GMC franchise.

They make such a dealership well worth the while of any far-sighted, progressive business man.

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Michigan*
Division of General Motors Corporation

1 Ton $1295 *2 Ton $2375* *3½ Ton $3600* *5 Ton $3950*
Chassis Only—At the Factory—Tax to be Added

See What Samuel Rea Says

Pennsy's President Predicts Various Things and Shows He's Watching Motor Trucks Closely

WHEN Samuel Rea, wide and thoroughly trained president of the great Pennsylvania Railroad, speaks, he is not necessarily incontrovertible. The very depth of such a man's training may put him in a rut in some important respects. Yet, when he speaks, the whole state of Pennsylvania sits up and takes notice, and so do other sections; and it is worth while. His broad mind, be it noted in the following, nevertheless is a railroad-trained mind, as to the motor truck. He welcomes it as an aid to the railroads, but specifically says—and undoubtedly wishes, whatever commercial evolution is bringing about—it should attend to the teeny-weeny hauls and let the rail lines do the long distance hauling.

Early September news from Philadelphia quoted Mr. Rea, on his return from Europe.

These changes are coming, he said: Direct bargaining between railroad managements and workers; a new system of rail rate making; electrification where traffic density warrants. These changes are not coming, he said: Motor trucks superseding railroads; air transport supplanting land transport; Government ownership of railroads.

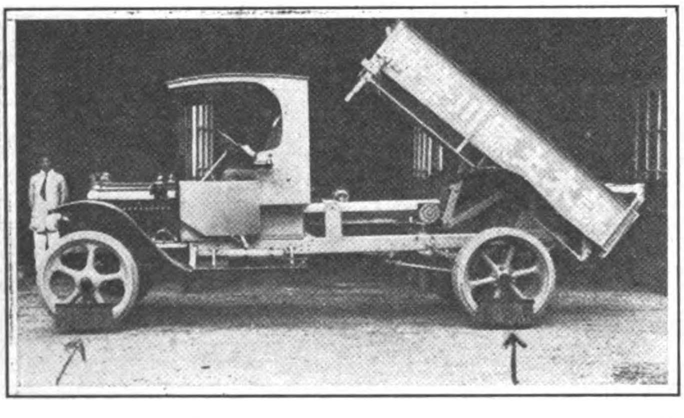
What Mr. Rea said about questions between transportation managements and employes may be applicable to motor transport in the not far distant future. He said:

"In so fundamental an industry as transportation no question transcends in importance that of relations between the companies and their employes. And if my judgment is correct, the coming years will witness a decided trend toward the decentralization of machinery for settling disputed questions, and the adoption of the sounder methods of direct bargaining between companies and their working forces.

"Our own road and its men have already taken the leadership in this question, and there has been successfully set up a workable—and working—plan of employe representation for the adjustment of controversial matters.

"Unions will continue to exist, and they can do much good under wise leadership which appreciates financial and economic necessities. Direct bargaining between the separate managements and their own men is, generally speaking, the correct method.

"Our employe representation plan on the Pennsylvania system is pure collective bargaining, and it is reasonable to believe that this method of wage adjustment, with more personal relations between management



WHEEL BRUSHES AS MUD GUARDS ON TRUCK IN JAPAN.
In the province in Japan where the White truck shown is in use, wheel brushes, serving as mud guards, are required by law. All motor vehicles there must have them, suspended from the hub caps. The brushes are within 2 or 3 inches of the ground. The idea is to prevent pedestrians being spattered with mud and water. In practice, it is said, the brushes are more of a nuisance than mud guards.

As to Government ownership of railroads, Mr. Rea said:

"I do not expect it because that would inevitably bring Government operation, which means mismanagement and use for political purposes."

Then this, as to motor transport:

"The much discussed motor truck will, I believe, become an important auxiliary of the railroads—supplementing rather than superseding it. For railroads are designed to be the 'wholesale' carriers—to perform the heavy bulk service, especially over long distances. Motor transport, it would seem, is destined chiefly for the 'retail' or local field.

"Broadly speaking, the great problem of the future will be to provide road and terminal facilities for the proper handling of the immense volume of traffic which we have every reason to anticipate."

London Trucks Rough On Pigeons

Three of the famous pigeons of St. Paul's Cathedral, in London, were found dead. They had starved in their efforts to feed their spring crop of young ones. Why? Motor traffic. The birds used to live on grain dropped from horses' nose bags. Now they depend on human generosity, and in rainy weather sometimes are foodless for days.

Impossible? Not at all. London's "white wings," street cleaners, are on the job. No litter accumulates. If you buy an orange of a vendor and peel it, put the peeling in the vendor's box or both he and you may get orders from a "bobby"—policeman.

Machine Guns for Motor Stage Lines

Officers of American Railway Express Co. recently saw a new machine gun tested at New York police headquarters. Its purpose is to protect motor trucks carrying valuable packages, and on which drivers were armed with revolvers some time ago. The machine gun may be fired from hip, shoulder or a mounting, using steel-jacketed bullets or bird shot. The latter was favored, as at 50 feet the shot spread over an 18 foot area, probably would not injure bystanders severely, yet would bring down the man aimed at.

How Trucks Save Farmers' Time

Ninety per cent of the farmers who responded to a survey made by the Department of Agriculture stated that the factor of time-saving is the greatest advantage of trucks over horse-drawn vehicles. Even on short-hauls the motor truck requires only about half the time needed to make the same trip by wagon.

No Matter, if the Load Is Lumber

A 5 ton truck loaded with 3000 feet of lumber went off shore at San Pedro, Los Angeles' harbor, went 30 feet to the bottom, rose again—and then the driver got out of his seat and got himself rescued into a rowboat. Later a tractor hauled the truck and its load ashore.

Flivver Spills a Truck, Beans, Eggs

A large freight truck was overturned near Union Gap, 6 miles south of Yakima, Wash., spilling 4 tons of beans and 36 cases of eggs and severely hurting one of the men on it; and the hardhearted driver of the uninjured Ford runabout that did it rambled along.

Vancouver Cab Line Run By Women

Mrs. Ralph Smith, member of the legislature in British Columbia, is president of a Vancouver taxicab company, and all her taxi drivers are women who drove ambulances in France and are skilled mechanicians.

Motor rail cars are being experimented with on Great Northern Railway branch lines out of St. Cloud, Minn.

Anti-Truck Propaganda Hit

Neat Solar Plexus Blow Administered Calmly and Convincingly By a General Motors Man

By C. S. MOTT
Vice President General Motors Corporation.

THERE are increasing evidences of a well defined movement to attempt to discredit the motor truck, on the ground that it damages the highway over which it travels. In some states the propaganda against trucks goes to such lengths that its misstatements are bound to react against it.

It is perhaps only natural that electric interurban lines, which feel so keenly the freight competition of motor trucks, should feel justified in making a fight for freight business, but they will not get very far by basing their campaign on statements which are not borne out by facts. Some interurban cars are carrying placards which read:

"Problem in Economics: Ship by Union Traction and save the highways. If a heavy truck earns 50 cents per mile, and damages the highway to the extent of $1 per mile, and the shipper of freight loses nothing, and the truck owner keeps the 50 cents, and the taxpayer pays the $1, where does the taxpayer get off?"

Whoever is responsible for the figures quoted needs to inform himself more carefully. Trucks do not damage highways to the extent of a dollar per mile. If they did, the roads in Wayne County, Mich., would be damaged to the extent of $450,000,000 per year by only 5000 trucks, operating 300 days in the year on 300 miles of road. There are fully that many trucks traveling over our roads, and the Wayne County road commission reports that surface maintenance, the need for which results from vehicular traffic of all kinds, and not trucks alone, is about $200 per mile per year, or $60,000 for the county.

Modern practice in road making keeps well abreast of the demands made on the roads by increasing volume and tonnage of vehicular traffic. Marked advances in highway construction have been made in the last five years, which also have seen distinct advances in the automobile truck. The modern roadway is well planned and constructed to resist the effects of traffic. Moreover, the cost of maintenance, taken the country over, is gratifyingly small.

If all of the anti-truck propaganda is as inaccurate as its estimates of highway damage by trucks, it will not get very far. It should be said, moreover, that shippers and truck owners are not the only ones to benefit by highway transportation. The ultimate consumer, who in the aggregate makes up the general public, benefits, too. And incidentally the truck owner, shipper and consumer are all taxpayers and bearing a share of the investment in good roads.

Road improvement is being made constantly, to keep up with the increased demands made on highways by modern automotive traffic. For the present, the answer to the accusation that trucks damage the roads is to improve the character of the roads. When the economic limit has been reached, it will be time enough to talk of the advisability of curtailing the activity of the automotive truck in order to save the roads. Just now, and especially in times of near-crisis like the present, the truck is demonstrating its usefulness to the public and the nation too clearly to make it likely that selfish propaganda on the part of any interests will discredit it in the minds of the people.

Rapid vehicular traffic admittedly is hard on road surfaces, and heavy loads are hard on any but the very best highways. There is an economic limit to the advisability of spending money on highways of the best type, based upon volume of traffic and other conditions, but not all the roads of the country have yet been brought to such a state that this economic limit is a very imminent factor. The future of highway construction and use probably will parallel the experiences of railroads and trolley lines. Neither the roadbed nor the rails of an earlier day could have borne the mogul freight locomotives nor the heavy and high powered trolley tractors of today. "Strap iron" has given way to heavy steel rails. Volume traffic at high speeds has made necessary the creation of our modern roadbeds for railroad and for trolley. Volume traffic at speeds undreamed of over the highways of a few years ago has brought about vast improvement in road surfaces, from the standpoints of smoothness, traction and durability.

Opportunity in
The Cletrac Line

THE complete Cletrac line offers the progressive dealer an unusual selling opportunity because of its *unequalled range of work-ability* and its *double market*. The new Model F cares for all jobs on the farm—even cultivates row crops clear through the growing season. And there is a great and steadily growing demand for the Model W in industry as well as on larger farms. "The Word of Men Who Know" is a folder describing the year-round activity of Cletrac selling. Write for it.

THE CLEVELAND TRACTOR CO.
Largest Producers of Crawler Tractors in the World
19127 Euclid Avenue Cleveland, Ohio

Los Angeles, 1029 S. Grand Ave.
San Francisco, 147 New Montgomery St.
Spokane, 30 E. Sprague Ave.

Trucks Increase in Portugal

American trucks are outnumbered by those of German and French manufacture in the district of Oporto, Portugal, according to advices from Consul Wiley. There are now 342 trucks used in this district, as against none prior to 1919, when practically all hauling was by bullock carts. French trucks number 167, German 108, and American 31. Large trucks prevail, being best suited to conditions. The roads are poor and the country mountainous.

Electric Truck Parade in New York

The annual electrical and industrial exposition will be held in Grand Central Palace, New York, October 7-14. As in former years, electric trucks and passenger cars, with their accessories, will form an important department. Incidental to the exposition a parade of electric trucks will be held, October 10.

Lem Loosehead says: Young fella I know says they's a lotta jack-asses he hates the sight of; 'n' I notice he never looks in a lookin' glass.

Tractor Department

Facts Affecting Tractor Interests

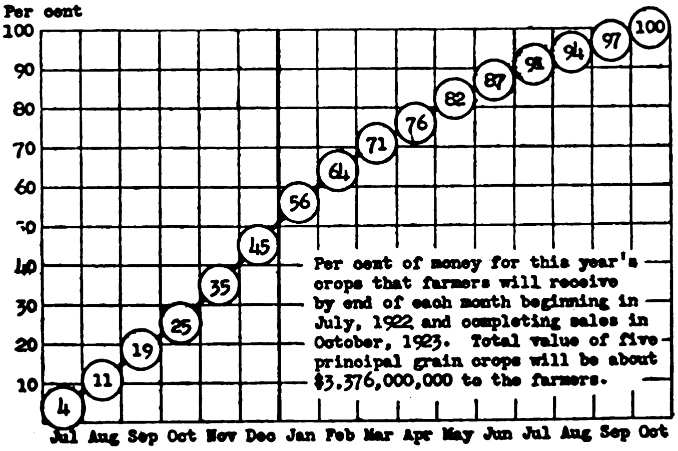
THE growth of wheat indicates the growth of other things. Everybody knows what bumper fruit crops the Pacific region produced this year. Federal reserve wheat figures are interesting:

	Aug. Forecast of Yield, 1922 (bushels)	July Forecast of Yield, 1922 (bushels)	Estimated Actual Yield, 1921 (bushels)
Arizona	1,274,000	1,330,000	830,000
California	14,900,000	13.243,000	8,355,000
Idaho	23,752,000	23,810,000	27,079,000
Nevada	651,000	630,000	493,000
Oregon	19,300,000	21,127,000	24,317,000
Utah	5,419,000	5.610,000	6,299,000
Washington	33,004,000	37,768,000	54,662,000
Twelfth District	98.300,000	103.518,000	122,035,000
United States	805,043,000	816.936,000	795,137,000

Carlot shipments of deciduous fruits from California during the 1922 season to August 1, the estimated total number of cars which will be shipped during 1922, and shipments during 1921 and 1920 are shown in the following table:

	Shipments to date Aug. 13, 1922 (cars)	Forecasted total shipments during 1922 season (cars)	Estimated Shipments 1921 (cars)	1920 (cars)
Apricots	190	190	285	312
Cherries	493	493	665	494
All Grapes	512	40,000	28,259	24,280
Peaches	1,513	3.500	3,334	3,148
Pears	2,908	4.000	4,160	4,391
Plums	3,076	3,400	3,099	2,564
	8,692	51,582	40,072	35,189

Adverse conditions now prevailing, both as to the transportation of and market demand for California fruits, (Eastern crops are normal this year and competing strongly), indicate that actual carlot shipments during the 1922 season will be less than the foregoing estimate of 51,282 cars.



Per cent of money for this year's crops that farmers will receive by end of each month beginning in July, 1922 and completing sales in October, 1923. Total value of five principal grain crops will be about $3.376,000,000 to the farmers.

FARMERS' PROBABLE PURCHASING POWER INDICATED.

About $3,250,000,000 is the Department of Agriculture estimate of the total farmers will receive from July, 1922 to October, 1923, a 16 months cycle beginning with harvesting in the Southwest in July of this year and ending when the most northern states begin to harvest the latest of next year's crops—corn, wheat, oats, barley and rye. In the chart the figures in circles show what proportion of the total farmers probably will receive by the end of each month. Half of the total is expected to be received (and mostly spent) by the end of 1922. The most rapid expenditure by farmers probably will be in November, December and January. As to what they are receiving and must pay, farmers are still worse off than in 1914 or 1915, but much better off than in 1921. Chart is printed by courtesy of Cleveland Trust Co.

Next month the Investment Bankers' Association of America holds its 11th annual convention, in Del Monte, Calif. On six special trains, Eastern members are to be shown the state from Sacramento to Los Angeles, with long stops at both places and at San Francisco, Fresno and Santa Barbara. Few if any of them, as usual, will see the rich region east of the Sierras—what a bother those big hills are, eh, wot? If they were not the wonderful rain catchers they are, and a few other kinds of wonders, we might consider removing them. Well—one thing these important visitors are to be told is that between the last two census periods California jumped from 16th to second place as an agricultural state, and attained first rank—by a big margin—in average farm income—more than $3500 per year. Another fact to be eased into their intelligences is that at the last census California had 4,219,000 irrigated acres—22 per cent of all the irrigated acres in the United States—that ought to make 'em ponder some. Irrigation investments in California total $194,000,000, or 27.8 per cent of the national total. Ye publicity man also says the visiting bankers are to be told California highway bond issues total $73,000,000, and that there is one automobile per 5¼ persons; a proportion exceeding that of any other state; in fact, "enough machines to depopulate the state in one day". In what way depopulate? Exterminate? No. Run away from a lot of little brown brothers? Hardly! Oh—tote 'em out on a boosting trip, eh? That's the stuff!

Everywhere, fairs are being held. Very different, in some respects, from the old-time fairs. On the whole, very much superior in results. The time given formerly to the chief attraction, which was the horse racing, now is given mostly to studying and buying the things that make life more profitable and livable, especially on the farm. Motor car makers and dealers are realizing the great value of state and county fairs; and a fair without a comprehensive showing of tractors—it may be said there is no such fair. It would not be a satisfactory exposition if it lacked tractors.

Oregon Tractor Caravan Success

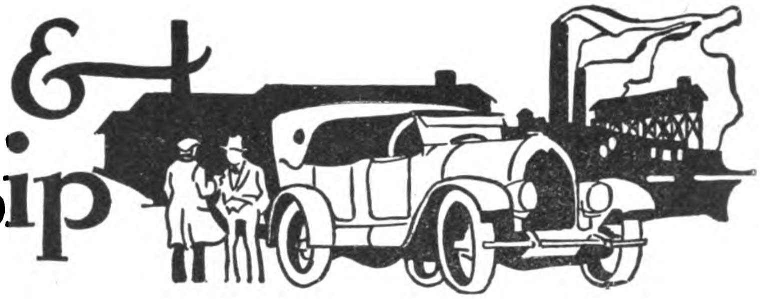
The Fordson tractor caravan, formed by the Fordson organization, Standard Oil and a number of lesser concerns handling tractor equipment, ended the first stage of its tour after covering the entire section of Oregon tributary to the Pacific Highway, from Ashland to Portland. Two weeks were spent in the trip, much interest was shown, and many actual sales were made, farmers ordering equipment immediately after seeing it demonstrated.

After a rest of several days, began the two weeks' tour of the northern section—to Tillamook, thence north along the coast to Seaside, then eastward through the Columbia River country, back to Portland.

The eastern part of the state then will be visited, after which the caravan will return to Portland, where a big 2 day demonstration will be given. If weather conditions are unfavorable at that time the demonstration will be given indoors and will be in the nature of a fair.

A neat and timely solar plexus thump is given the railway propaganda against motor trucks, in an article by a General Motors official in this issue.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"
(F. Ed Spooner, Detroit)

In spite of bad conditions in the rail and coal fields, automotive production has been maintained at a pace which has brought surprise to even the most optimistic, and consternation to those who were disposed to be slightly pessimistic. The question of the hour has been: "Where are the cars going to?" And the reply has been, in many instances: "Hanged if I know."

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It's the replacement business in the large cities that brought the score up to the grand total of 1,259,692 passenger cars and 135,374 trucks for the 7 months of the year to August 1. That is a total of 1,395,066 vehicles for the 7 months. At this writing, if all reports for August continue, the final figures will show this summer month to have produced hardly 10 per cent less than the record June, when 263,017 passenger cars and 25,985 trucks came from the factories. That is to say, they came from the 90 passenger car and 80 truck makers who report production.

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Now, if August should maintain the figures predicted by authorities, then the grand total for 8 months will run slightly over 1,600,000 passenger cars and trucks, and the season, with four months to go, will surpass the 2,000,000 mark handsomely. It may go to 2,500,000 with the coal and rail strikes settled, for then the farmers will move their crops, fruit growers will be able to reach their markets, and above all else the confidence of buyers will have taken the right route. The fact that August came forward so nicely proves the market to be most exceptional. July and August usually are slack months, comparatively, but this year proves the exception, for July production was almost 250,000, and August may reach 288,000.

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When Ford announced he would close on September 16 for lack of coal, and said that he would not buy at the profiteering prices, speculation arose as to what other makers would have to do. The situation seems to be that all are having a time of it, but pulling along somehow and hoping against hope that matters will be straightened out. Statements from a great many of the larger makers have brought confidence. But it is stated by several in private that difficulties are considerable, in fact greater than are made known for publication.

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Scarcity of materials is the stumbling block, for shipping is bad. The coal and rail strikes made it difficult for the manufacturers to keep an accumulation of supplies on hand.

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In the speculation regarding the Ford action there has been much written. Some have said Ford's situation is due to enmities created through his railroad. He has demanded that coal and supplies be routed to his road. Coal companies and railroads flooded his road for a while and tied up cars, but then refused, in view of the situation, any demands elsewhere. Other financial writers have had it that Ford usually shuts down in September for inventory, and that his statement regarding closing September 16 was a hit at the administration for failing to end the strikes, and at Wall Street for controlling the situation. There is quite another explanation, by a distributor of Ford cars, who said Ford had crowded dealers all over the country through production of more than 5000 cars a day. In closing he allows the dealers to clean up the cars they have on hand and clears the deck for the new models with one-man top, and other changes.

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Today the makers other than Ford are anticipating a smart fall business. There is every indication of that. Closed cars will have a healthy run and closed car shows are to be featured every week. Many cities, including Los Angeles, are hurrying forward early shows for all models, while large cities are naming dates for closed car and used car shows, antedating the regular annual event.

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Detroit manufacturers in the automotive field are battling for their very existence at Washington. Those in other cities are doing the same thing. Coal is becoming scarce and factories face a shutdown or great expense to change to oil fuel. Representative Brennan has tried to have coal for the automotive makers placed on the preferred list, but without avail. He has made the claim that automobiles and motor trucks are essential, and that if the railroads break down these industries should be encouraged in every way to continue record production. Commissioner Atchison informed Mr. Brennan that there was no possibility of placing the automobile industry on the priority list until production in the mines increased sufficiently to meet the demands of the various public utilities, such as electric light, garbage and water plants. After that peak has been reached the automobile industry's contention will receive serious consideration.

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Reports show few cars held in storage, and these will disappear rapidly if manufacture stops. Unless there is a change in the railroad and coal situation the United States may look for a shortage of motor cars and trucks at a vital time. True, the soft coal situation was cleaned up, but the soft coal mines have been idle so long that it would be a matter of months before demands could be met.

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New or improved models, and new makes of cars, are being announced steadily nowadays, and eyes are once more being cast forward to the national shows at New York and Chicago, when more that is new will be seen than ever before. The shows are going to be the most interesting ever held. In the last three years there has been almost total absence of changes in models. This was due to the business slump and to manufactured inventories. Demand during the present year has cleared up stocks of materials, and today the makers are working on new materials entirely and at prices allowing development of improved models at a minimum price. Whether the shows will bring forth more price alterations is a question only to be answered at show time.

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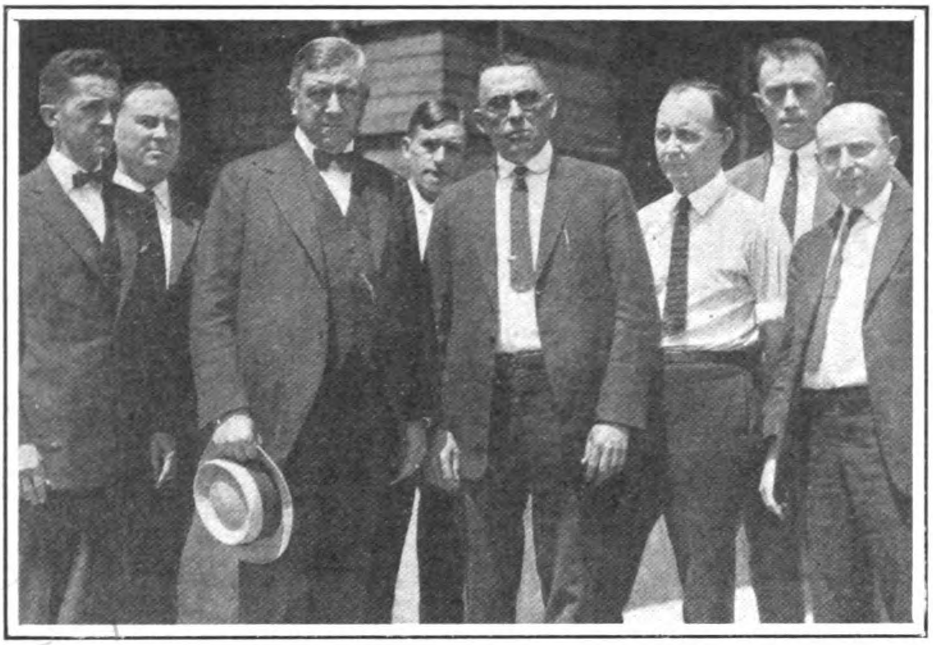
One situation that is peculiar today is that of the motor truck. Building has picked up amazingly, roadbuilding activities are noteworthy the country over, farmers have banner crops and must have trucks, and general business has shown steady gains, but the motor truck business has not shown recovery in line with the passenger car industry. Out on the Pacific Coast the gain in commercial car registrations has been larger than in any other part of the country, and increases in that section absorbed many of the trucks shipped there, in advance. The result has been a steadily increasing demand from the Coast for more trucks, and then more.



CHARLES M. SCHWAB AND OTHER LEADERS IN STUTZ MOTOR CAR CO. OF AMERICA.

Charles M. Schwab began as a common worker in the iron mills Carnegie owned, and rose to become Carnegie's most valued aide. Now, as head of Bethlehem Steel Corp., he is known the world over as a master handler of optimistic, highly constructive ideas. Sure! One who has watched a gang of puddlers, or axle makers, or rollers, in the mills, can realize what power the work puts into a man capable of absorbing it instead of letting it absorb him. That's the kind of man "Charlie" Schwab is; the man who, long an important stockholder in Stutz Motor Car Co. of America, now controls it, and has had the prices of its splendid cars reduced, and retained its executive personnel, and stated his faith in its future. He is in the front row in the picture above. At his left is Fred E. Wilson, general sales-manager; at his right are W. N. Thompson, president and general manager; Charles S. Crawford, chief engineer; H. R. Hyman, advertising manager. In the back row, left to right—E. T. Klee, purchasing agent; W. F. Glickert, plant superintendent; L. V. Bedell, assistant treasurer.

Rolls-Royce Sales Increase.

Rolls-Royce, Inc., Springfield, Mass., reports that in the second quarter of the year sales increased 233 per cent over the first quarter. This percentage held good throughout July, which almost invariably is a low period in automobile sales.

Orders are reported as not confined to any particular metropolitan district, but as coming from widely distributed points. This is attributed to establishing Rolls-Royce representatives in the principal cities.

The output showed a satisfactory increase in the second quarter over that of the first, as additions to the works force were made at intervals during May and June. In July, when the force was increased further, an increase was reached, in finished cars, of more than double the average monthly shipments of any previous quarter.

The company is considering operating a night force in some departments, to keep pace with the demand. The organization of its own coach works, is about completed.

* * *

Hardy Rarely Takes Vacation.

A. B. C. Hardy, president and general manager of Olds Motor Works, Lansing, Mich., recently took his fourth vacation in 30 years. He believes in vacations for others, but finds his own relaxation in work. For a long time he has been an important executive in General Motors, and since going to Lansing, to assume the presidency of Olds Motors Works a year ago last May, he has demonstrated that he is not tied down by any definite hours.

Mr. Hardy combined business with pleasure on his vacation trip. He addressed a large meeting of Oldsmobile dealers in Pennsylvania, at Pittsburgh and went to New York for conferences with General Motors executives before going to the northern part of Maine for a few days.

* * *

To Brazil for Maxwell-Chalmers.

Leonard Vandersall, for several years special representative of Maxwell-Chalmers in South Africa, has been transferred to Brazil to complete a survey of that field, according to an announcement issued by H. M. Salisbury, export manager. Mr. Vandersall has established headquarters in Rio de Janeiro, and reports that Brazil, which in common with other South American countries of importance suffered severely from the economic depression, is showing considerable improvement in motor car trade. He anticipates that the Brazilian Centennial exposition to be held this fall in Rio de Janeiro will give considerable impetus to American motor car export.

* * *

Australian Conditions Good.

Indications of a banner year in the Australian motor car trade are more and more in evidence, reports Ira L. Burke, Packard distributor at Sydney, Australia. Mr. Burke completed arrangements at the factory for a special shipment of Single-Sixes to Sydney. In speaking of business conditions in the Antipodes, Mr. Burke explained that New Zealand, which experienced severe over-inflation during the war period, was still feeling the recent general depression. "However, in Australia we have just had a big wool clip and a record-breaking wheat crop. With such favorable conditions, automobile dealers cannot help do well.

* * *

Say 1923 Star Output Sold.

Factory officials' state contracts have been signed with distributors which will take practically the entire 1923 output of Star cars from the Durant factory at Lansing, Mich. The plant will manufacture Stars for the territory between the Alleghenies and the Rockies, and its capacity is 400 cars daily. A start on the manufacture of the Star will be made at the plant September 15, but it is not expected to get into capacity operation before the first of the year.

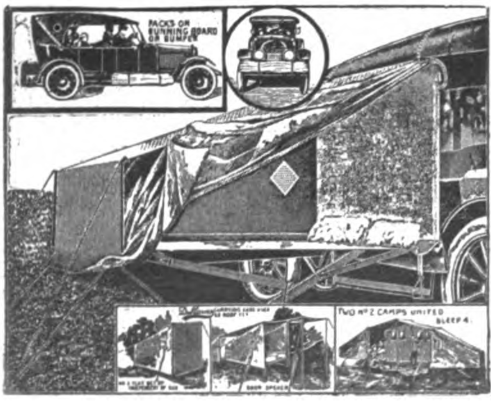
* * *

To Push Trex Air Valve Lock.

An announcement of interest to the automotive equipment trade is of the appointment of Walter P. Coghlan as vice president and director of sales of Trexler Co. of Philadelphia. He resigned recently as general sales manager of American Hammered Piston Ring Co., Baltimore. Mr. Coghlan will direct the sales of the Trex air valve lock, which already has attained a wide popularity since it was put on the market early this spring.

* * *

Tip—old English abbreviation of "To insure promptness", a sign put on a contribution box in eating places.


PACKS ON RUNNING BOARD OR BUMPER
DOOR OPENED
TWO No 2 CAMPS UNITED SLEEP 4.

This Tent Including
Our Sagless Spring Bed
$39.50
weight 39 pounds
See Our Camping Exhibit.
Everything for the Camping
Motorist
AUTO BED CAMP CO.
2243 W. Washington
Los Angeles, Cal.
WRITE FOR CATALOG

Mason Is Maxwell Works Manager.

Announcement is made by W. Ledyard Mitchell, vice president in charge of manufacturing, Maxwell Motor Corp., of the appointment of George W. Mason as works manager.

Mr. Mason is a singular case of a man who has been making steady progress upward in motor car manufacturing with the best quantity producers. He had a wide range of experience with Studebaker and Dodge Brothers prior to his last year with Maxwell, and during this period he also was one of the principal executives in the American Auto Trimming Co. He developed rapidly also in the Dodge Brothers leather business, later becoming general superintendent of that factory as operated by Central Leather Co.

During the war Mr. Mason took a prominent part in production activities at the Rock Island arsenal, assisting in the application of modern industrial methods, and becoming one of the principal executives in the reorganization of that institution. This was followed by a fortunate experience with a large New York bank, developing to the point where he represented it in important industrial reorganization work.

The advancement of Mr. Mason, according to Mr. Mitchell, is in recognition particularly of his leadership and energy in the work of rehabilitating the Maxwell plants and processes, which has resulted in the present high standard of Maxwell product. Mr. Mitchell refers to his ability to organize, and to obtain co-operation among his co-workers, as contributing notably in the quick return of the Maxwell plants to quantity production.

* * *

O. P. Robb Sales Head of Stephens.

Appointment of O. P. Robb as vice president and sales manager is announced by Stephens Motor Car Co., Moline and Freeport, Ill. For a number of years Mr. Robb has been a successful sales executive for Moline Plow Co., and his broad and intimate knowledge of field conditions and dealers' selling problems fits him particularly for his new post. At various times he has served as manager of the Moline Plow Co.'s branch houses at Winnipeg, Kansas City, Dallas, Omaha and Los Angeles. More recently Mr. Robb has been assistant general sales manager of Moline Plow. The Stephens sales offices are now located at Moline.

W. A. Biss, Jr., will continue as assistant sales manager of the Stephens, with headquarters also at Moline.

* * *

Butterfield Is Dyneto Sales Head.

The first appointment announced by Ralph M. Owen, of New York, who bought Dyneto Electric Corp., Syracuse, a few weeks ago for $205,000, is that of Clayton W. Butterfield as sales manager. Mr. Butterfield thus returns to the position he held four years till early in 1920, when he became sales manager of Herschell-Spillman Motor Co., North Tonawanda. The past year he was assistant general manager of Apex Motor Corp. He graduated from Syracuse University in 1911 and began his business career in that city.

Dyneto Electric Corp. manufactures motor starting systems, lighting plants, small motors and generators, and other electrical apparatus. Since its sale to Mr. Owen it has been working back to normal production.

* * *

Fellow Workers Honor Mr. Day.

W. L. Day, president and general manager of General Motors Truck Co., celebrated his tenth year with the company on September 1. His fellow workers made the occasion memorable by means of a golden plaque, suitably inscribed, and bearing the signatures of employes connected with the organization seven years or more. There were about 60 names signed to the testimonial, which is very highly prized by Mr. Day.

E. K. HOAGG.

H. A. Brown, Jr., manager of the Motor Bearings Division, Hyatt Roller Bearing Co., Detroit, announces the appointment of K. K. Hoagg as advertising manager. Mr. Hoagg's nine previous years of engineering and sales work for this company form a sound basis for his present duties, which involve supervising advertising, sales promotion and commercial research work.

* * *

Wildman Buys an Ohio Plant.

Wildman Rubber Co., Bay City, Mich., announces its purchase of a large tire and rubber plant at Port Clinton, O., covering more than 30 acres bordering on Lake Erie, and formerly occupied by Ohio State Tire & Rubber Co.

* * *

W. C. Rowley Leaves Federal.

W. C. Rowley, vice president in charge of sales of Federal Motor Truck Co., has resigned but will remain as a director. F. L. Pierce, sales manager, now is in charge of the sales department.

Tracy Traveled Some, That Day!

How to keep three important engagements in one day—one of them at a distance of 205 miles by rail from the other two—was a problem W. R. Tracy, assistant sales manager of Oakland Motor Car Co., Pontiac, Mich., had to solve recently.

He had planned engagements with two dealers who were already en route from far distant points to meet him at the factory at Pontiac, one to arrive on a Wednesday morning and the other late in the afternoon. Meantime he received word from the Oakland branch in Cleveland that it was necessary for him to be in Cleveland to sign a lease on Wednesday.

This is how he solved it: He met the dealer who arrived early Wednesday morning and traveled by automobile to Detroit, where he just made connections on the Buckeye airplane of the Aeromarine Airways which left at 1 o'clock for Cleveland. He arrived back in Detroit on an airplane of the same company at 5:30 p. m., and having wired ahead to have the second dealer wait at Pontiac for him, transacted business with him that evening.

Selah—the world's traveling fast and furious these days!

* * *

Timken Roller Change.

Timken Roller Bearing Co., of Canton and Columbus, O., has readjusted its capitalization, which hitherto has been owned almost exclusively by the Timken family. A portion of the family's holdings has been acquired and will be placed privately by a group of New York bankers. This company has nothing to do with the Timken-Detroit Axle Co. except that the latter is a customer of the former.

* * *

Notable Veteran Passes On.

Van M. Cartmell, 72 years of age, who for many years, until a breakdown in 1920, was president of the Kelly-Springfield Tire Co., died August 23 of pneumonia, after a prolonged illness. Mr. Cartmell was a native of Springfield, O., and was one of the pioneers in the rubber industry. Many years ago he was the founder of Springfield Rubber Tire Co., which manufactured tires for carriage wheels.

* * *

Reo Adopts Longer Week.

The Reo Motor Car Co., Lansing, has resumed operations on a full 5½ day week, after being on a 5 day basis through the summer. It has been the company's plan to work the short week through the warm weather period, but sales have increased to such a point that it is necessary to get largely increased production.

* * *

Maibohm to Arrow to Courier.

Arrow Motors Co., Sandusky, O., which was incorporated to take over the assets of Maibohm Motors Co., will change its name to Courier Motors Co. It is to manufacture a car of the $1000 class.

How General Motors Used Planes.

The first time on record, it is stated, that an airplane was used for commercial purposes in Canada was recently when the plant of General Motors of Canada, Ltd., at Oshawa, Ont., was short of some steering wheel assemblies necessary to complete a large overseas shipment.

The needed parts were not heavy, but very numerous. Delay meant missing a boat, with possibly serious consequences. A hurry call was sent to the plant of the Dayton Wright Co., at Dayton, O., a division of General Motors, and within a few hours airplanes were on their way to Oshawa with the material. Landing was effected at Toronto, where the planes were met by trucks from the Oshawa plant and the material hurried forward in time to complete the important shipment.

The 450 mile trip from Dayton to Toronto was made in 4 hours 20 minutes. Weather prevented the pilots from attempting the lake crossing at the widest part, and for a considerable distance the shore line was followed.

About 100 gallons of gasoline were used by each plane. The planes were equipped with 400 horsepower Liberty engines, with a possible speed of 120 miles per hour.

* * *

New Corduroy Tire Unit.

Grand Rapids Tire & Rubber Corp. has authorized an addition to the Corduroy cord tire factory in the shape of a complete new unit. Work on it will start at once and when completed will have cost about $250,000. L. A. Brown, president and general manager, says: "Corduroy cord tires are now distributed in every important jobbing center in the United States; by more than 600 dealers in Michigan alone. We have used a very conservative policy both in financing and sales, and attribute the success we have had to our patented sidewall protection feature, the quality of the tire, and the fact that we market through legitimate channels only."

* * *

Plans for Beaudette Plant.

Formal transfer of the plant of O. J. Beaudette & Co., body manufacturers, to Fisher Body Corp., has been effected, and the factory in Pontiac is now running under the general management of Frank E. Mills, former secretary of the Beaudette Co. No definite plans have been announced by the Fisher Co. as to the work to be turned out, but it is understood the plant will build a large number of Chevrolet bodies. The plant is still running on Ford contracts.

* * *

Gallup Opens Own Offices.

David L. Gallup, well known in the engineering branch of the industry, has opened consulting engineering offices in Indianapolis. He was professor of mechanical engineering at Worcester Polytechnic Institute many years. Five years ago he joined Nordyke & Marmon Co. as research engineer, from which connection he recently resigned.

* * *

Investigator Davis Joins Durant.

James A. Davis, for the past three years manager of the Advertisers and Investors Protective Bureau, and investigator for the Illinois secretary of state in the administration of security laws, has been appointed to a confidential position close to W. C. Durant. The exact nature of his duties has not been disclosed.

* * *

As Seen by Indiana Truck Man.

John A. Rhue, treasurer of Indiana Truck Corp., Marion, Ind., after an extended trip through Missouri, Kansas, Oklahoma and Texas, was very much impressed with the way business is improving; everything on the upgrade. A good fall and winter business is expected.

* * *

Barney's Reminiscent Celebration.

Barney Oldfield is getting ready to celebrate the 20th anniversary of his first automobile race victory. This happened on September 21 back in 1902, on the old track in Grosse Pointe, Detroit, when Barney drove the famous Ford "999," doing 5 miles in 5.26 minutes.

* * *

Ford's 3500-Room Office Building.

Further centralization of Ford Motor Co. at Dearborn is seen in announcement of the construction of a 3500 room office building on the site of the present tractor plant. When it is completed all Ford offices will be in Dearborn.

* * *

Deal for Plant in Elgin Is Off.

American Steam Truck Co., Chicago, has notified the Elgin Association of Commerce that negotiations for the purchase of the Duty Motor Co. plant in Elgin have been canceled.

* * *

Reynolds Spring Dividend.

Reynolds Spring Co., Jackson, Mich., has declared a dividend of 1¾ per cent on the preferred A stock, and of 1¾ per cent on the preferred B stock, both payable September 30.

* * *

Maxwell Official Returns.

Arthur W. Barker, vice president and general sales manager of Maxwell Motor Co., sailed for home recently from Europe, where he had been investigating conditions.

* * *

Ostby Is Prest-O-Lite Sales Head.

Oscar F. Ostby, associated for some time with Prest-O-Lite Co., Inc., has been appointed general sales manager, succeeding C. C. Leininger, who has resigned.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

Some Accommodation!

Business transacted during the first six months of this year by General Motors Acceptance Corp. exceeded the volume in any corresponding period since its organization. It finances the wholesale and retail sales of General Motors products in this country and abroad. These include Buick, Cadillac, Chevrolet, Oldsmobile, Oakland, GMC truck and Delco lighting system for the farm. From inception early in 1919, to June 30, 1922, there have been financed under the GMC retail plan a total of 186,161 cars, trucks and tractors, and under the wholesale plan 126,920 cars, trucks and tractors. This does not include other General Motors products financed, nor the operations of the foreign department. The total amount of financial accommodation extended by General Motors Acceptance Corp. from inception to June 30, 1922, was $270,692,236.

* * *

Campbell Back to Firestone.

Homer C. Campbell, chief administrator of the city of Akron since February 1 of this year, has resigned to join the Firestone Tire & Rubber Co., with which he was before he took the city position. He will become assistant treasurer of Firestone, in charge of foreign and domestic credits, and will serve as chairman of the operating committee of the Coventry Land & Improvement Co., controlled by the Firestone company and providing homes for Firestone employes.

* * *

Burnett Joins McKee Staff.

Leo N. Burnett has resigned as advertising manager of the La Fayette Motors Co., Indianapolis, to join the copy and planning department of Homer McKee Co., Indianapolis, early in September. Mr. Burnett has directed La Fayette advertising three years, and formerly was advertising manager of Cadillac.

* * *

Porter Rises in Bowser Co.

L. E. Porter, for the past three years director of publicity for S. F. Bowser & Co., Fort Wayne, Ind., manufacturing gasoline pumps and tanks, has been appointed assistant general manager. R. L. Heaton, formerly assistant to the president, succeeds him as advertising manager.

* * *

New Gray Motor Building.

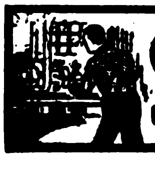
Operations have started on a new unit of the plant of Gray Motor Corp., in Detroit. One new 60x400 unit has been completed. The building now under construction will be 60x600. A loading track will run between the two new buildings.

* * *

J. D. Chamberlain, for several years assistant purchasing agent of Hudson Motor Car Co., has resigned, and has made no announcement of plans.

* * *

(More factory items on page 6)



Shop Practice Hints

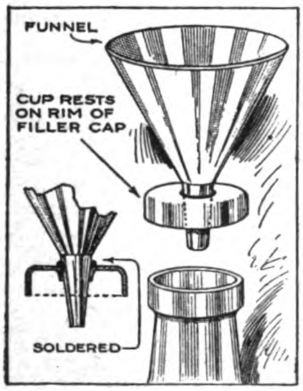
Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

REMEMBER.

Remember, you need the grease on the inside of the part you are oiling, so wipe the outside clean, in this way keep the car clean, and your trade is better satisfied and your business will increase.

RADIATOR FILLING FUNNEL.

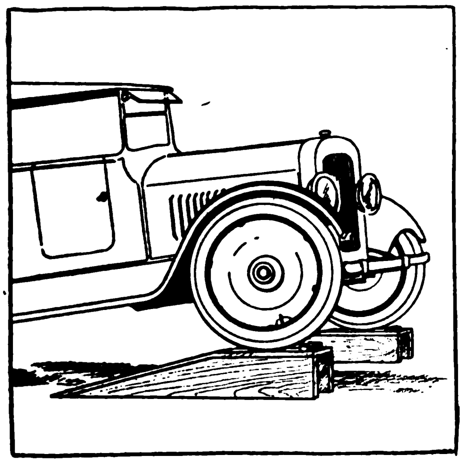
In any garage or service station where a funnel is used frequently in filling radiators, the modified type shown in the illustration will prove highly satisfactory, as the funnel always remains upright and spilling is avoided. Take any old funnel and braze or solder an old bearing cup over the outside, as shown, with the concave side of the cup down. This funnel is desirable when putting alcoholic anti-freezing solutions into the radiator, as these should not be spilled. The alcohol, if spilled, will attack the varnish of the hood and radiator and cause white spots.



RADIATOR FILLING FUNNEL.

EASILY MADE SKIDS.

A pair of good skids, convenient to have around a garage, are shown in the illustration. They can be knocked together in a short time from pieces of scrap lumber, and three or four pairs will not cost as much as one good jack. When the car is placed in position as shown, there is no fear of the skids being knocked over, as often happens with the ordinary jack, endangering both the car and the worker. The skids can be made as high as desired, and if made high enough plenty of light will reach the underside of the car, eliminating the necessity of a mechanic lying on his back to reach any part of the chassis. These skids are intended more to take the place of a jack than for work which had better be done over a pit.



EASILY MADE GARAGE SKIDS.

AVOID SPOILING TAPS.

As every metal worker knows to his sorrow, taps are very delicate tools. There are two ways, among many others, in which taps are made useless. One is to turn them with a monkey wrench instead of a regular tap wrench. This brings a bending strain on the tap because of the onesided pressure, and often breaks the tap. The other way is to use taps in cored holes in castings without first cleaning out the holes with a flat drill to take off the hard, gritty scale. This scale is hard on cutting tools of all kinds.

A GOOD FLUX SPREADER.

A very convenient soldering flux spreader has been devised by a handy shop worker. It consists of a glass or brass tube, ¼ inch size, and of sufficient length to reach the bottom of the bottle containing the flux.

One end of the tube is heated and flattened until it is almost closed. To use the device the flattened end is dipped into the flux bottle and a finger placed over the other end when it is withdrawn. The acid will be released whenever the finger is withdrawn.

A TIMESAVER.

Often much time is lost when looking for a drill to fit a certain bolt. This can be avoided by using a gage made by drilling a hole with every size drill in a piece of ¾ inch board. The bolt is tried in the holes until the proper size is found, and the proper drill then can be selected. Every drill size should be stamped above its corresponding hole in the board, and the gage kept handy for everyday use.

SOLDERING CAST IRON.

In soldering cast iron it will be much easier to make the solder stick if a piece of soft brass is rubbed over the iron after it is thoroughly cleaned and scraped, and before the solder is used. The brass must be soft enough so that a little of it will stick to the iron. Then use the solder in the usual way.

AFTER BABBITTING.

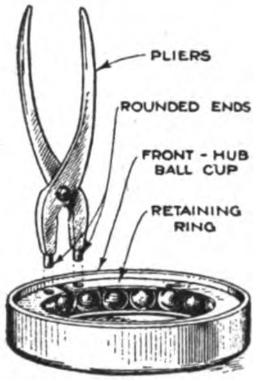
After babbitting a bearing, if no reamer is available, take a sharp chisel and raise a burr on opposite sides of a steel shaft of proper size, and use it to ream out the bearing to a working fit.

LEAKS IN FLOAT.

Small leaks in a hollow metal float can be repaired by placing the float in melted paraffin and rotating it until it is completely coated by the wax. This will not only fill the holes but protect the float from corrosion.

REMOVES BALL BEARINGS.

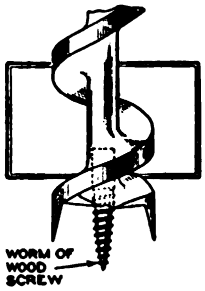
The spring rings that retain the ball in the cup of the front hub ball bearings of a light car are difficult to remove and replace by ordinary methods, such as prying with a screwdriver, which usually damages the parts. The drawing shows a simple tool for this purpose that avoids distortion and bending. It can be made from a pair of pliers, preferably the round-nosed variety. The nose of the pliers is ground down until the separate jaws fit in the drilled holes in each end of the ball bearing ring. To compress the ring the jaws of the pliers are placed in the holes and the handles pressed together, drawing the ends of the ring together and making it removable instantly. These pliers also can be used in replacing the ring easily, by reversing the operation.



TO REMOVE BEARING RINGS.

REPLACING BROKEN BIT WORM.

When the worm of an auger or bit is broken off, or worn so it will not draw the cutting edges into the wood, generally it is considered useless and is thrown away. However, a new worm can be inserted easily and the tool restored to all its former usefulness. File or grind off the old worm as close to the cutting edge as possible, then drill a hole of suitable depth and diameter into the shaft. A woodscrew of nearly the same diameter as the hole is then cut to the proper length, the hole is then filled with hot solder, and the screw carefully inserted and centered, allowing enough of it to extend beyond the cutters to serve as a new worm. The illustration shows how the tool will appear when finished, with the new worm.



REPAIRED BIT WORM.

Vinegar will remove hardened paint and varnish from paintbrushes quickly.

Why not raise your boy to be an automobile repairman?—L. A. Times

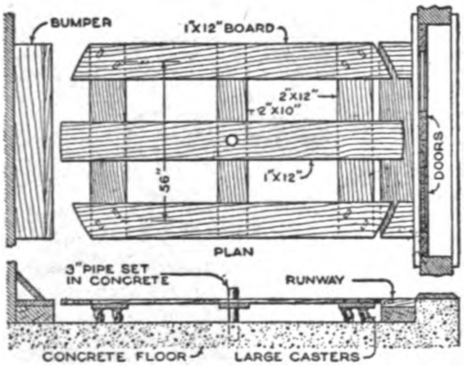
Motorists' Letter-Box

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

A HANDY TURNTABLE.

Editor Motor West: Our garage has such a difficult driveway to negotiate that my wife cannot back either in or out, and we must devise a way to turn our machine around in the garage without going to the expense of buying one of those all-steel turntables. What can you recommend?—B. P. S., Seattle.

The illustration shows an easily made turntable that can be used for a light car only, in a private garage. In the center of the floor of the garage a piece of 3 inch pipe is set firmly. A rectangular frame of a size appropriate for the wheelbase of the car is constructed as shown; two heavy castors are placed in each corner, directly under the wheels of the car.



AN EASILY MADE TURNTABLE.

On a cement floor of ordinary smoothness a woman of moderate strength can turn the car around without undue exertion. If some scrap lumber and a piece of pipe can be obtained cheaply, about the only expense will be the labor and the cost of the castors.

WARPED VALVE.

Editor Motor West: What is the best repair in case of a warped valve head or bent stem?—H. L. M., Salem, Oreg.

The best remedy for a valve having a bent stem, or a warped disc is to replace it with a new one. It is a waste of time to try to repair it. If the stem is bent below the guide it could be heated and straightened in a vise.

COLUMBIA SPECIFICATIONS.

Editor Motor West: What are the specifications of the new Columbia light six, which is listed at $985 at the factory; also, what is the weight?—C. P., Santa Ana, Calif.

The Columbia light six has a 45 h. p. motor, 6 cylinder, Red Seal Continental; Timken axles front and rear; Stromberg carburetor; Autolite starting and lighting system; Durston transmission with Timken bearings; Borg & Beck clutch; Spicer universal joints; Gemmer steering gear; Disteel wheels, 31x4 tires; wheelbase 115 inches; and weighs 2400 pounds. These parts are all standard and can be had in most places at special service stations established by the makers.

GREASE LEAK.

Editor Motor West: I have a Ford which throws grease out of the ends of the rear axle housing, keeping the wheels and tires covered, which I consider is very hard on tires. I have tried different kinds of grease but have been unable to stop the leak. How will I remedy this? Should I put hard oil in the differential?—A. J. S., Sacramento, Cal.

By all means do not put hard oil in differential. Oil will not stop the leak. What you need is grease washers. There should be felt grease washers in each end of the axle housing. Yours are worn out and should be replaced. You should be very careful to get the new ones in properly or they will cut right out again, but if properly installed they will stop the leak.

STARTING SCRIPPS BOOTH.

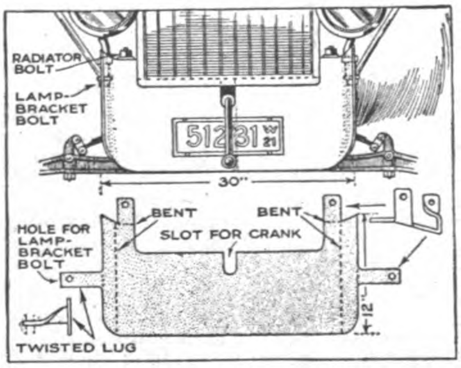
Editor Motor West: I have a 1919 Scripps-Booth. The motor will not start until it has been primed through the spark plugs. I have had the valves ground and in addition have had several garage men try to locate the trouble. Can you suggest a way to remedy this?—D. S. G., Berkeley, Calif.

(1) Be sure choke is closed entirely. (2) Inspect for air leak in intake manifold. This should remedy your trouble immediately.

APRON AND MUD SHIELD.

Editor Motor West: Can you tell me of a good way to improve the front appearance of my car? It has no apron or mud shield in front, and as I like any kind of mechanical work I thought I could fix it if you could make a suggestion.—P. S. B., Amity, Ore.

A sheet of metal just 30x12 inches, cut according to the pattern shown, and held in place by the lamp-bracket and radiator blocks, so that the frame and front spring of your car are concealed, will produce a very material improvement in its appearance, and probably add to your mental comfort. This apron also provides a place for attaching the front license and will prevent the front of the car from being splashed with mud from the front wheels.



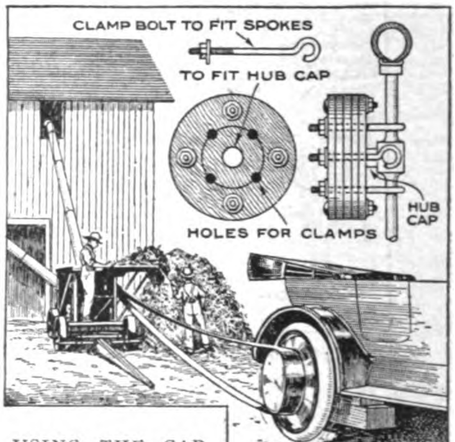
APRON AND MUDSHIELD FOR SMALL CARS.

The sheet metal should be about the same gage as that which is used on your fenders and on the body of the car. You had better first make a pattern of stiff paper, or cardboard, with the positions of the bolts marked accurately. The shield then is cut from the pattern and fitted. The lower corners then can be rounded and the outer edges curved to ward off the splashed mud.

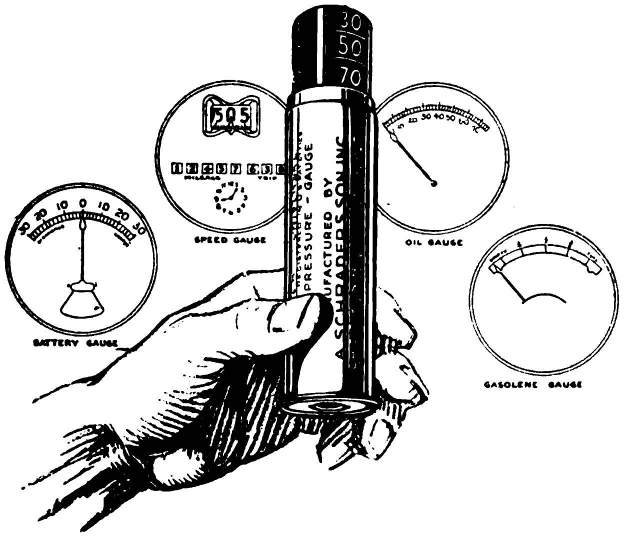
CAR AS POWER PLANT.

Editor Motor West: Can you tell me of a practical way to make use of my car on some of my stationary farm work, as I cannot afford a gas engine and still keep the automobile, which gives us a great deal of pleasure.—L. M. G., Madera, Calif.

By means of the attachment shown in the illustration you can use your car to opperate any machine within the capacity of its engine. By using six or more oak discs, 1 inch thick and about 12 inches in diameter, you can built up an excellent pulley. The discs should be assembled in a pile, so the grain of no two pieces runs in the same direction, except on the two outside discs. Use plenty of hot carpenter's glue between the discs and apply considerable pressure by using any available weights. Then allow the glued-up assembly to set until the glue has hardened thoroughly. Then drill four holes through the discs and bolt them together with half-inch bolts. Cut a hole in the center of the pulley, of sufficient depth and diameter to fit the hub or hub cap of your car tightly, so the pulley will be held away from the spokes a short distance, to prevent the edge of the belt coming into contact with the wheel. Use four heavy clamp bolts, of the type shown, with the hook just large enough to fit around the spokes of the wheel, and long enough to pass through the holes drilled in the pulley. You can make the hooks a little larger and cover them with pieces of hose to prevent marring the spokes. This pulley can be attached to either rear wheel. The wheel is then blocked up or jacked up securely and the pulley belted onto whatever machine you wish to use. The engine is controlled in the usual manner, or can be set for a certain speed and the operator retire to the machine in use.



USING THE CAR ON FARM AS A POWER PLANT.



Own a Tire Gauge Too

You can't put a tire pressure gauge on your instrument board, but you can carry one in your pocket or tool-box.

At all times you should know the amount of air in your tires.

Too much air and your car rides like a truck with solid tires.

Not enough air and your tires lose their strength by bending and flexing as they roll over the road and by straining and stretching the fabric or cords at every bump.

Don't guess at the air in your tires. Nine times out of ten the driver who guesses he has enough air has too much or not enough.

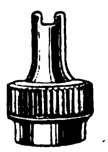
Don't depend on borrowing a tire gauge. Own your own gauge. A Schrader Tire Gauge will cost you $1.25. The mere knowledge that your spare tire is fully inflated is worth that.

Air is free. You can put in as much as you want, without cost. You can let out excess air without waste.

The Schrader Tire Gauge will last for years. It will not go wrong. It will not register inaccurately. Bold white figures on a black background stand out like figures on a slate.

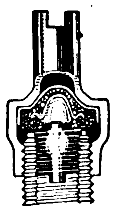
Sold by garages, hardware stores, and motor accessory stores.

SCHRADER VALVE CAPS



Seal in the air. A dome-shaped rubber washer reinforced by an arched metal plate fits tightly over the valve. The valve pin cannot be depressed. The Valve Cap is simple and effective equipment for keeping air sealed in tires.

Five caps in a metal box, 25c.



A. SCHRADER'S SON, Inc., Brooklyn, New York
Chicago Toronto London

Manufacturers of Schrader Valve Insides and Valve Caps, Packed in Metal Boxes of Five Each

SCHRADER

TIRE-PRESSURE-GAUGE

LEATHER ZAPON CLOTH

The upholstery that is dependable

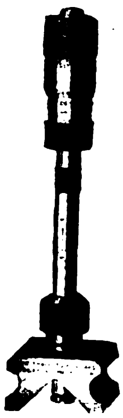
Send for samples showing the ZAPON brands—Muleskin, Broncho and Mustang—that are made especially for fine automobile upholstery and California Top Work

ZAPON LEATHER CLOTH COMPANY
200 Fifth Ave., New York
Branches: Detroit, Los Angeles

New Things in the Accessories Field

MICROMETER AND HEIGHT GAGE.

The Reed Small Tool Works, Worcester, Mass., has developed an inside micrometer with lower range than former models. It is graduated to read to thousandths of an inch, and has the usual half-inch run of spindle with a measuring range of 2 to 32 inches. It has the regulation diameter of barrel, spindle and thimble. The rods fitted with adjustable steel anvils are interchangeable. A detachable handle is supplied for right or left-hand work. The standard set, in a pocket size case, consists of micrometer head, adjusting wrench, five rods and one half-inch spacer. Using five additional 5 inch spacers gives maximum range of 32 inches. Thus the tool is capable of gauging the smallest cylinder, and taking care of larger measurements in shop use. The inside micrometer is transformed into a height gage by height gage attachments. Attaching a rod of proper length to micrometer gives any range from 3 to 32 inches. The rod is inserted through the steel case-hardened base until the anvil finds the surface from which measurement is to be taken. A quick-clamping nut, easily turned by the fingers, holds the measuring rod firmly perpendicular. This tool ascertains the height of projections from plane surfaces, location of bushings in jigs, etc., and is particularly convenient on planer work measurements taken from the bottom of a groove to points above, and for setting planer tools. The V shaped groove in the base adapts it for cylindrical work, measuring distances between shafts, alignment, etc. The cut pictures the combination of No. 6 height gage alignment attachment and inside micrometer, showing how a reliable height gage is obtained simply. With a .250 inch drill rod in the base and a standard indicator, a surface gage is ready for straightening shafts, or checking variance in distance between surfaces. The Reed height gage round base attachment No. 7 differs from No. 6 in having a larger base area, and larger and deeper reamed hole. The upper end of support, split vertically at right angles, is adjusted to provide sliding friction as the rod is inserted and will tend to prevent side play.



REED MICROMETER.

3 IN 1 UNIT FOR FORDS.

The 3 in 1 unit for Fords, Ford trucks and Fordson tractors, combines in one compact, sturdily mounted casting a timer, an oil pump and a water circulating pump. Resulting from the efficient operation of these three, the engine is kept running cool and powerfully, oil costs are cut 50 per cent, gasoline 15 to 25 per cent, and vibration and carbon are eliminated, it is claimed. The timer is raised above the usual position where wires and timer run constant danger of becoming oil-soaked. It also is of easy access for adjustments. It has oilless-wipe contact, and a standard Bosch distributor head, with either manual or automatic advance for Bosch ignition.

The oil pump is of force-feed gear type. A copper tube from pump to special connection at lower petcock leads oil to front of engine. The combination being integral makes it possible for pump to discharge oil through drilled passages in the casting directly over the gears driving the unit, giving proper and positive lubrication at all speeds. The oil pump will perform as long as the car will run, it is claimed. The water circulating pump is positively driven by gears, without need for special belt.

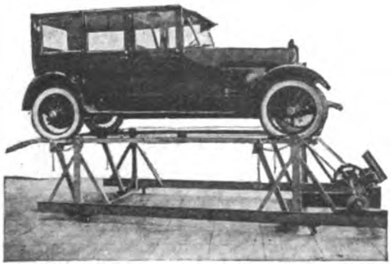
The 3 in 1 unit sells at $31; with manual battery ignition system, $53; with compensating battery ignition system, $55. The manufacturer, Hexagon Specialty Co., 3650 South Grand Ave., St. Louis, is meeting a heavy initial demand and is appointing exclusive distributors throughout the country.

PELTON PISTON RING CO.

Pelton Piston Ring Co. has been formed in Detroit by H. Belknap, formerly of Golden, Belknap & Swartz; Carl H. Pelton, former secretary of the Maxwell-Chalmers companies, and Charles E. Pelton, whose former connections include Timken-Detroit Axle Co. The organization is to produce a ring to take care of .035 over-width and .040 over-diameter. It is designed to stop oil pumping.

DAVIS LIFTER.

The Davis automobile lifting device is a mechanical structure which raises a car 4 feet above the ground, permitting thorough inspection and easy repair work beneath it. The car is driven onto two U shaped steel runways, and by an ingenious gear and pulley arrangement it is claimed a small boy can quickly lift the car to the desired height by simply turning a crank. The repairman then works at ease and full efficiency on the under parts of the car. Manufactured by Davis Auto Lifting Co., 500 Auzerais Ave., San Jose, Calif.



THE DAVIS LIFTING DEVICE.

VALLEY BUFFERS.

Valley Electric Co., Kingshighway and Connecticut St., St. Louis, manufacturer of electric motors, buffers, motor generator sets and battery chargers, reports the sale of 17 buffers to the U. S. Post Office Department. These have been shipped to the tire service sections of post office garages in Atlanta, Detroit, Kansas City, Los Angeles, Memphis, Omaha, Cincinnati, Newark, Buffalo, Denver, Dallas, Norfolk, Grand Rapids, Jacksonville and Chattanooga.

VALLEY BUFFERS.

They have the standard ball bearing 2 h.p. Valley motor, with the rotor shaft extended on each side to carry emery stone and compound brush. Buffer is mounted on a heavy cast iron base, giving rigidity to the whole machine. End plates keep windings free from dust. Buffer is 46 inches high and occupies 4 square inches of floor space.

BUTLER VAPORIZER.

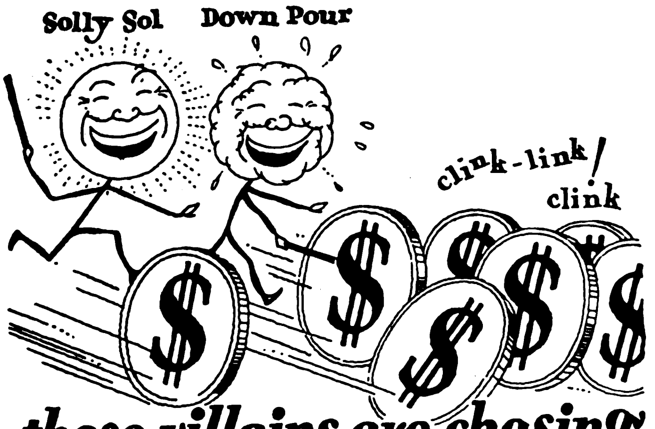
The Butler vaporizer is a combination mixing and superheating device, installed between carburetor and intake manifold. It consists of seven copper tubes, enclosed in a cast iron heating jacket and through which the fuel mixture passes. Hot gases from the exhaust pipe are bypassed around these tubes, and led out by another ending under the engine pan.

The principle is similar to that of the automobile radiator, in reverse order, the mixture being heated and volatilized by contact with the heat-surrounded tubes.

The seven small tubes are claimed to eliminate the "cold center" by bringing all the liquid fuel into contact with heated surfaces and flashing all the mixture into a dry gas that immediately increases engine flexibility and power. Fuel consumption costs are reduced 20 to 40 per cent, as repeatedly proved in official tests at Yale University and in the Tracey Laboratories.

Manufactured by Butler Vaporizer Corp., 7 East 42nd St., New York City.

Pyrene Mfg. Co., 520 Belmont Ave., Newark, N. J., has made a reduction in the price of Off 'N' On tire chains, it is announced by E. E. Doane, assistant general sales and advertising manager.



-these villains are chasing the Dollars toward You!

You can't stop the sunshine and you can't prevent the rain—BUT you can take advantage of the mischief these two villains do to unprotected spare tires.

Every time a spare tire goes on a car—an "Angelus" Tire Cover should go on too.

The motorist knows he wants a tire cover, and he wants one that FITS.

So ask him to buy an "Angelus."

"Solly Sol" and "Down Pour" are on the job all the time. They are chasing business to you.

Get your share of these dollars and get the good will of the man who spends it with you.

Sell him an "Angelus."

An exclusive Angelus process of painting permits the use of emblems in any number of colors on tire covers—something new. Write us about it.

Angelus Tire Covers

the tire cover with the Drain Holes

Parker & Waterman Mfg. Co.
Los Angeles

Order From the Angelus Distributor Nearest You

AFTER all, the big thing in a tire is quality. Low price may gain temporary favor but mileage and service will be remembered long after price is forgotten. That is why we have constantly refused to lower Kelly-Springfield quality to meet the demand for lower prices.

More efficient manufacturing processes and increased production have brought Kelly prices down but Kelly quality is higher than ever. The Kellys of today are the finest tires we have ever built.

If you would like to sell a quality tire—a tire that will give service—a tire that will help you build a permanent and profitable business—write for the Kelly proposition *today*.

Now, it costs no more to buy a KELLY

Kelly Springfield Tire Co.
General Sales Department
250 West 57th St., New York City

HAYES PATHFINDER.

All parts of the Hayes Pathfinder safety light are full nickeled brass, and non-rusting, the shell is enameled dull black. The heavily silver-plated reflector throws a powerful white beam, instead of the yellowish light often delivered by spotlights. Mounted outside the windshield, it is tilted and controlled by an inside handle for picking out dangerous side ditches, reading danger signals and road directions, getting the necessary light for making tire changes or engine repairing, discovering house numbers, etc. Installed quickly on open or closed cars, motorcycles, or motorboats. Manufactured by Hayes Motor Truck Wheel Co., Jackson, Mich. Price $8.50.

THE HAYES PATHFINDER.

WESTERN FORD PUMP.

The Western water circulating pump for Ford cars and trucks is said to be of the best materials, with bronze propeller and bushings, and positive in action. A 32 inch belt, which the manufacturer supplies, drives the pump shaft pulley from the fan hub. The pump is installed by detaching the elbow in the inlet manifold at the engine side, and attaching the pump with two bolts, all in 20 minutes. Inlet is direct from pump to engine, with no angles to prevent water being forced through at the proper speed for a cool and efficiently running engine. According to Western Pump Co., 912 South Grand Ave., Los Angeles, it will outlast the car. Price, with new fan belt, $8.

CUTS BLINDING GLARE.

G. M. Levesque, 205 Detwiler Building, Los Angeles, has put on the market a small rectangular device of fine-mesh wire to catch headlight rays and throw them in a particular line along heavier strands of wire placed at ¼ inch intervals. It was invented by Antonin Dubuc, an Angeleno, and Bowers Mfg. Co., 35th and Hill Sts., are the makers.

JIFFY DUMP BODY.

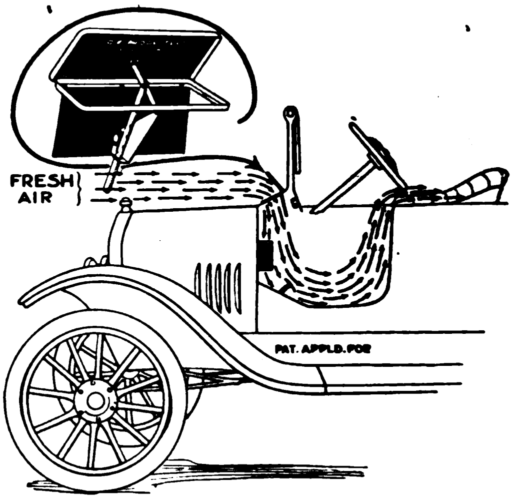
Griscom-Russell Co., 90 West Street, New York, has placed on the market the Jiffy dump body for Ford 1 ton trucks. It is said to be the lowest steel dump body manufactured when placed on a Ford chassis, a feature which practically eliminates dangers of upsetting, and permits easy loading. Construction and operation are very simple. A distinctive feature is the scale balance support, which means there is no hoist, and the body dumps automatically upon releasing the locking device.

The driver can operate the dump body from the seat without stopping the truck. He releases locking device and body automatically tilts until it reaches the 45 degree angle, when tail gate opens and dumps the load. This tail gate can be arranged to spread material to any desired thickness on the road, and is of double acting design to permit change to express body. The scale balance support is about 5 inches in front of the rear axle, giving an excellent load distribution on the chassis.

The manufacturers report that the Jiffy dump body is meeting with unusual interest, that demand for it is beyond all expectations. Some reasons for this are the scale balance support permitting automatic operation, and absence of levers and hoist, and the absence of a separate subframe, as subframe is welded directly to the all-steel body. Some agencies have been established for this body, which will be distributed direct by the manufacturers, who have been in business since 1867.

O-K VENTILATOR.

The O-K ventilator for Ford cars is installed in the cowl, outside the windshield, to direct cool, fresh air down to the bottom of the driver's compartment, relieving the hot miserable condition often produced there by a hot-running engine in the summer time. The air inlet is 3x7⅝ inches. It is opened by a toggle joint fastened to the center of the cover, which is bowed, and the arm support at the bottom eliminates rattle and chatter. The wind deflector rear plate, a special feature, directs the air where most needed, and also supports the operating arm. Finished in black baked-on enamel, nickeled brass, or in any color to suit the car finish. Manufactured by O. K. Products Co., 2660 Washington Ave., St. Louis. Price $3.



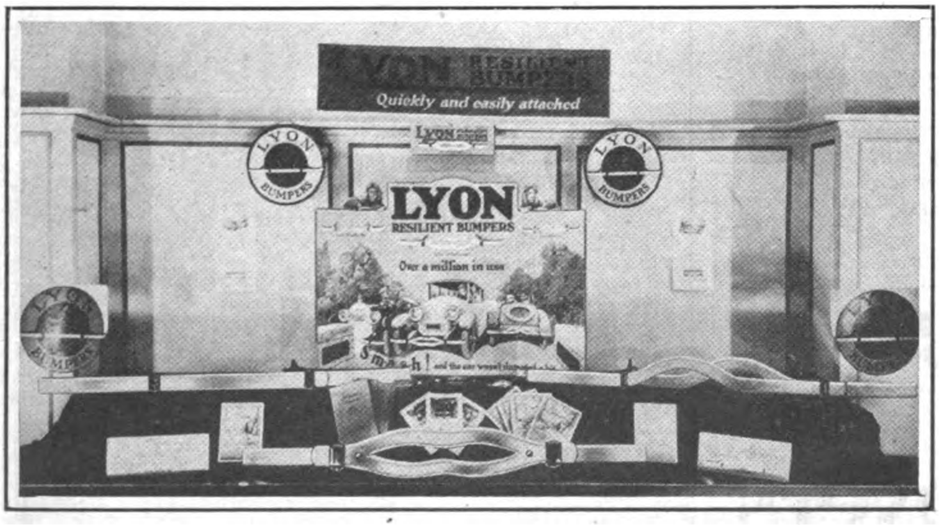
O. K. VENTILATOR.

5,000,000 IN 2 MONTHS.

The fact that the Piston Ring Co., Muskegon, Mich., has only been going after replacement business less than a year, gives special significance to the recent production record of 5,232,051 Quality piston rings during two consecutive working months. Although the plant is the largest exclusive piston ring factory in the world, with its capacity of 12,000 rings per working hour, there is every reason to believe that further expansion will soon be necessary to keep abreast of the ever-increasing demand.

SIMPLEX AIR BRAKE.

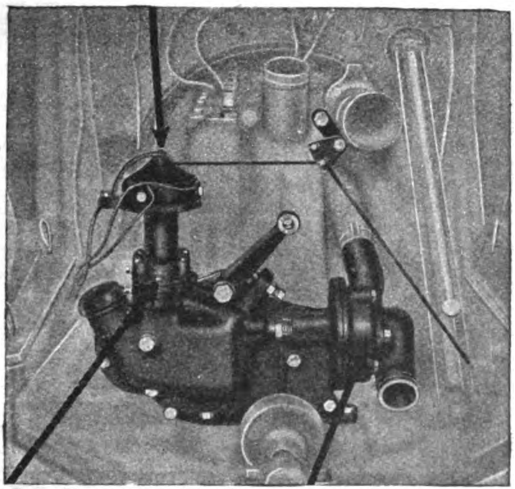
Pacific Automotive Service, Inc., of Los Angeles, San Francisco, Oakland, Portland and Seattle, is marketing the Simplex air brake, and its approval by insurance men with a view to lower rates on motor vehicles of any kind, fitted with it, is under consideration. It is put on in addition to the regular brake equipment. It is said to stop a car going 35 miles an hour in 32 feet less distance than the ordinary foot brake does. Ordinary atmospheric pressure operates it—no compressed air tank or pump needed.



LYON BUMPER WINDOW DISPLAY LITHOGRAPH PUT OUT BY METAL STAMPING CO.

A good thing should be advertised in every good way. One good way is a novel lithographed window display placed at the disposal of dealers handling Lyon spring bumpers, manufactured by Metal Stamping Co., Long Island City, N. Y. Realizing that accessory sales are heaviest in spring and summer, but that the need of bumpers is particularly urgent during the period of streets made slippery by ice or rain, the display is put out now so as to increase autumn and winter sales. The idea, of course, is to entice the passerby inside, there to tell him about how the Lyon bumpers lessen insurance rates, often more than enough to cover their cost. The Lyon bumpers are guaranteed to take the full force of any blow at the rate of 15 miles an hour without injury to the car or its occupants. They are beautifully finished, remarkably strong and perfectly balanced, and are attached quickly without drilling or altering the frame by using the Lyon patented hook-bolt. More than a million are in use. Price range $10 to $25.

Timer Raised



Gear Type Force Feed Oil Pump

Gear-Driven Water Pump

A.	3-IN-1, non-starter type or Fords from 1909 to 1919, with oilless-wipe contact timer, - - - - - - - -	$31.00
B.	3-IN-1, starter type for Fords from 1919 to 1922 with oilless-wipe contact timer,	$31.00
C.	3-IN-1, with Bosch manual battery ignition system, -	$53.00
D.	3-IN-1, with Bosch compensating battery ignition system, - - - - - - - -	$55.00

C. and D. furnished complete with special cable and coil.

An Ignition, Water and Oiling System for Fords

The three greatest trouble makers for Fords are the timer, the water system and the oiling system.

The 3-IN-1 overcomes these deficiencies. This efficient device places the timer in an accessible position, out of the oil and grease. The gear driven water pump forces a positive flow of water through the cooling system.

One mile without oil will utterly ruin a Ford motor, while a well lubricated motor can run for 1000 miles without appreciable wear. So it is imperative to have the 3-IN-1 with its gear type force feed oil pump on a Ford motor. It eliminates the possibility of burnt out bearings due to the clogging of the oil tube or its inability to properly furnish lubrication on the upgrade.

The water pump keeps the Ford motor cool. An overheated motor is impossible; as the water circulating pump is gear driven, which means it is dependable at all times—no belt slippage to worry with. In winter, too, the water pump is valuable, for it eliminates largely the danger of freezing.

Use original Ford bolts and nuts when installing. No holes to be drilled.

Dealers will find this a quick seller and a profit maker. Write for proposition.

HEXAGON SPECIALTY MFG. CO.,
3632 S. Grand Ave., ST. LOUIS, MO.

3 in 1 for Fords

IGNITION, WATER AND OILING—ALL IN ONE

Traffic Truck

A BETTER PRODUCT—LOWER PRICES

DEALERS

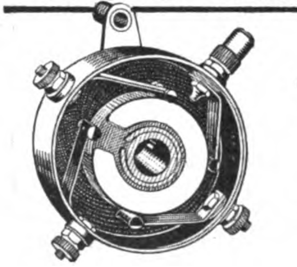
J. E. KENDRICK
1359 W. Washington St., Los Angeles
GEO. W. BARR
500 L St., Sacramento
RAY SEYMOUR
1514 Van Ness Ave., Fresno
O. F. LINDBERG
888 4th St., Santa Rosa
THURLOW DOWELL
Yuba City
TOKAY CITY GARAGE
Lodi
L. K. FARGO
526 10th St., Modesto
G. LEE HARTSHORN
Salinas

SERVICE-PARTS

HIRSCH MOTOR CO.,
1639 Market St., S. F.
Factory Representative

R. JACKSON JONES
Manager
1265 Battery St. Tel. Sutter 7250
SAN FRANCISCO

U & J Timers *for* Fords



Use it 15 Days

Money Back Guarantee

Any U & J dealer will sell the U & J Ford Timer, for Ford and Fordsons, on this basis. We absolutely *guarantee* the U & J Timer to outlast five ordinary timers and give a red-hot spark every mile of its life.

By the Rotor principle it gives a wipe contact of steel on steel that insures the hottest possible spark. Its simplicity makes it

Complaint-Proof—Trouble-Proof

The price to Ford owners is $2.50. Sold by dealers everywhere with this *15 day trial—money back guarantee.*

Write today for terms and information

U & J CARBURETOR CO.
Exclusive Manufacturers of U & J Motor Devices
Main Office and Factory
2847 So. Halsted St., Chicago
Pacific Branch
357 Van Ness Ave., San Francisco

For Easy Motor Control and "Prompt Power" get a U & J Accelerator with its Adjustable Foot-Rest and Guide—the only practical foot-throttle applicable to all Ford Motors. All Steel—Nickeled—"Puts a Ford in the big car class." Price $2.50.

WE MAKE OLD ONES NEW
A B CO
CHICAGO ILL.

The Sign of Service

Ahlberg Ground Bearings
for Any Type of
Automotive Equipment

Reduce the cost of upkeep by saving the original parts.

Ahlberg Ground Bearings are bearings which have been in actual service and after becoming worn have been repaired. This is done by regrinding the raceways to their original contour and inserting new oversize balls and our own perfected retainer.

Our twelve years' experience in specializing in the repair of worn bearings has taught us how to do this work in a way that enables us to guarantee satisfaction.

There are thirty-five direct factory owned branches maintained at convenient points to give you service.

Take your old bearings to our nearest branch and exchange them for Ahlberg Ground Bearings.

AHLBERG BEARING COMPANY
1708 So. Grand Avenue
LOS ANGELES, CALIFORNIA

Akron Fresno Oakland
Atlanta Boston Buffalo Baltimore Seattle Brooklyn
Cincinnati Cleveland St. Paul Columbus Dallas
Detroit Indianapolis Duluth Kansas City
Memphis Milwaukee Minneapolis Omaha Newark
New Orleans St. Louis New York Portland Oakland
Philadelphia Pittsburgh Providence San Francisco
Washington Toledo Youngstown

Western Trade Notes

Long Beach, Cal.—Glenn E. Thomas will build a $40,000 brick building, 1029 American Ave.—Clay D. Bizant and W. F. Hackers have opened a garage, 626 Pacific Ave.—J. R. Jones has opened Jones Auto Paint Co., 330 Locust St.—J. L. Brambila, former sales manager for L. H. Rose Co., San Francisco, has become Maxwell and Chalmers dealer here, opening at 443 American Ave.

San Pedro, Cal.—J. C. Monahan, 6th and Pacific Sts., has been made Mac-Dry battery agency here.—William Lever has opened a garage, 464 11th St.—W. L. Williams & Co. has opened a repair shop, 4th and Pacific Sts.—Parnell Motors Co., Long Beach, Durant and Packard agency, has opened a branch here, 2nd St. and Pacific Ave.

Pasadena, Cal.—J. E. Richardson and Fred Krug have sold Pasadena Motor Supply Store, 55 W. Colorado St., to Charles M. Sayres.—H. R. Young and J. Neil Patterson have opened Young & Patterson Co., 20 S. Pasadena Ave.—Jackson & Lucas have opened an automobile repair shop, 85 W. Colorado St.—R. R. White is now electrical repair work manager at Midway Battery Service Station.—Sam Gilbert has bought F & G Garage, 75 W. Union St., from Fountain & Graff.

El Monte, Cal.—C. J. Glasser and J. Chasson have bought Central Garage from Ray Morgan.

Covina, Cal.—Merritt Motor Co., Chevrolet agency, has been changed to San Gabriel Valley Chevrolet Agency, being now owned by Emerson Taylor.—F. B. Miller has been made Durant agent here, locating on South Citrus St.

La Verne, Cal.—Jack McIntyre has opened McIntyre Auto Co. on Bonita Ave.—Chevrolet Garage has been opened by W. E. Horne, J. F. Slagle, F. H. Wilkins.

Glendora, Cal.—Morris & Zerker have reopened Vermont Ave. Garage.

Chino, Cal.—Jacob Bertschinger has opened White Garage, a fine new building with 10,000 square feet floor space.

Puente, Cal.—S. A. Peet has opened Puente Battery & Ignition Service Station at Didier Bldg., on Main St.

Downey, Cal.—Sachs & Sons have bought Redfield Brothers Garage.

Pomona, Cal.—White Garage, 225 E. 2nd St., has been opened by Chevrolet Garage, Inc., composed of Horne, Slagle & Wilkin.

Fullerton, Cal.—Wickersheim Implement Co. will have a $50,000 garage built on the site of its present building, 115 W. Commonwealth Ave., of 2 stories and ultra-modern construction.—Murray & Sanderhoff have sold their garage and battery shop to McGraw Brothers.

Santa Ana, Cal.—W. L. and S. E. Richards have reopened the former Hardin & Collins Garage, 421 W. 4th St., and will operate a garage as Richardson Brothers.

Redlands, Cal.—George Hayes Motor Supply Co. has been opened by George Hayes in Lombard Block.

Coachella, Cal.—Paxton & Taylor of Coachella Battery & Ignition Works have taken over the battery department of Coachella Garage.—Roy J. Lyon has sold Coachella Service Station to W. J. Briggs.

Corona, Cal.—E. G. Gilliland and W. Hooker have taken the Dodge Brothers car agency, locating at 504 Ramona Ave.

Escondido, Cal.—Guarantee Garage is having additional service, repair and parts rooms built, which will double its former floor area.

San Diego, Cal.—Walter Folcke and Roy Campbell have opened a White truck and Stevens-Duryea agency, 1230 State St., and will also act as official Nash car service agency.

Paso Robles, Cal.—Hibbard & Hibbard, automotive electricians, have moved to their new location, 14th and Spring Sts., handling Philadelphia batteries.

San Luis Obispo, Cal.—Gibson Brothers, Nash car dealers, have opened their new and modern garage, 1035-39 Monterey St., of two stories, and basement, with 21,000 square feet storage space.

Salinas, Cal.—Thrift Garage Co., Inc., headed by I. Takata, K. Nagano, and B. Y. Kobayshi, 14-18 N. Main St., have become Michelin tire dealers.

Puente, Cal.—Everett, Halneritch & Clark have sold their Ford agency to Harry C. Apgar.

Santa Ana, Cal.—May Motor Co., Nash and Lafayette car distributor, has occupied its new $30,000 home, 2nd and Sycamore Sts.

San Bernardino, Cal.—M. L. Cash has bought Keystone Garage, 541 Court St., Chandler and Cleveland agency, for whom he has been salesman for several years.

MONEY MAKING MACHINERY

For Machine Shops

For Repair Shops

DO IT ON A GRINDER

There are numerous small jobs which can be satisfactorily done in a jiffy on a good grinder.

This Grinder Head, equipped with long graphited bearings, stands unrivalled.

Sold by

SMITH-BOOTH-USHER CO.

Machinery, Industrial and Construction Equipment, Supplies

San Francisco
50 Fremont St.

Los Angeles
228 Central Ave.

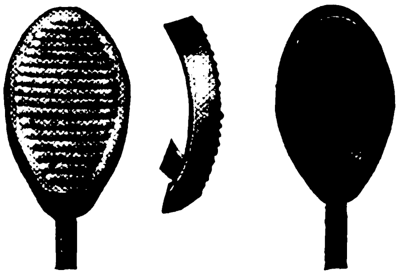
ANNOUNCING

STIK-ON

Rubber Pedal Pads for Fords

What they have all been looking for—
a cheap pad that stays put.

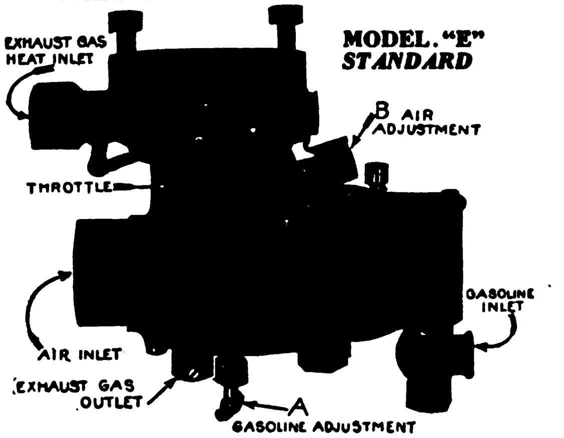
Price $.60 per set of 3, in carton



Manufactured by

Cushion Pedal Company

287 San Fernando Rd., Los Angeles, Cal.



MARVEL CARBURETORS

GIVE

Universal Satisfaction

POWERFUL— ECONOMICAL— SIMPLE—

Write for our new Catalogue

MARVEL CARBURETOR CO.

FLINT, MICHIGAN, U. S. A.

Distributors:

Marvel Carburetor Sales Co.,
1837 So. Flower St.,
Los Angeles, Cal.

McAlpine & Schreiner
1520 Tenth Ave.,
Seattle, Wash.

Edwards-Warden Motor Parts Co.,
Salt Lake City, Utah

DENBY
MOTOR TRUCKS

REDUCED PRICES

Effective Jan. 1, 1922

	Was	Now
Model 31, ¾-1¼ ton Speedster	$1625	**$1485**
Model 33, 1½-2 ton	2300	**2145**
(Pneumatic tires used on above models)		
Model 34, 2 ton	2600	**2395**
Model 35, 2½-3 ton	....	**2795**
Model 27, 4 ton	4200	**3895**
Model 210, 5 ton	4850	**4295**
Model 214, 7 ton	5500	**4945**

F. O. B., Detroit, chassis with seat

With rock bottom truck and service prices, the Denby line offers a very desirable factory connection to live dealers.

Write or wire for full details

LETS TALK BUSINESS AND GET BUSY

Denby Motor Truck Company
Detroit

Makes Overhead Valve Motors Noiseless

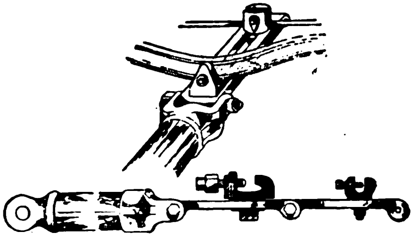
THE Lane Rocker Arm Silencer will make any overhead valve motor car sound just as sweet and quiet as the day it left the factory. Spring takes up lost motion between valve stem and camshaft. Takes but a moment to attach. Satisfaction guaranteed. When ordering state name and year of car.

for
BUICK
CLEVELAND
ESSEX
OAKLAND
NASH, etc.

NATIONAL EQUIPMENT CO.
487 Commercial Trust Bldg. Philadelphia, Pa.

Send No Money Lane Rocker Arm Silencers cost $2.00 a set. Send no money but order a set today and pay postman on delivery plus the few cents postage charge. If you prefer send $2.00 net.

UNIVERSAL (RED) TOW-BAR (one man)
(Patented)



Attached to any make of car in a few minutes
Saves Time—Labor—Money
Buy now from your jobber—He has them
WALTER W. BIDDICK, INC., DISTRIBUTORS
1316 South Grand Ave., Los Angeles. Phone 822-729

QUAKER CORDS
are Trusty Friends

Our New Selling Proposition will show you how to get volume sales.

QUAKER CITY RUBBER CO.
Factories: PHILADELPHIA
PHILADELPHIA 624-26-28 Market St. CHICAGO 217-21 W. Huron St. PITTSBURGH 30 E. Lacock St., N.S.
NEW YORK, 53 Murray St.
Pacific Coast Office: 304 Williams Building, San Francisco

MOTOR WEST

Reaches a larger percentage of dealers and repairmen than any automotive trade publication circulated on the

PACIFIC COAST

Phoenix, Ariz.—Palace Garage, 425 W. Adams St., is now under management of Henry Lutjens and Whitton McLellan.

San Diego, Cal.—U. S. Grant Auto Equipment Co., 652 2nd St., has become Michelin tire agency for the county.

Winnemucca, Nev.—E. A. Smith of Smith Garage has taken over the Humboldt County agency for Ford cars.

Havre, Mont.—Havre Motor Co., capital stock $100,000, has been formed by H. W. Stringfellow, William Kendig, W. C. Lange, to handle Ford cars and Fordson tractors.

Onalaska, Wash.—G. E. Wakefield Garage will be opened in a new building, 60x100 feet, now being built here.

Billings, Mont.—Billings Overland Co., 415 N. 27th St., is having a $6000 addition built, which will increase its sales space 50 per cent.

Fairfield, Mont.—Fairfield Garage has been opened here by Joe Marantette

Centralia, Wash.—W. L. Bronson has taken the Paige agency.

Darby, Mont.—B. J. Billings has bought Darby Garage from Frank Robertson.

Hamilton, Mont.—Leon and Loren Smith of Smith Auto Co. have bought Harold Nicol Garage in Erickson Block on 3rd St. and will occupy it as headquarters.

Oakland, Cal.—G. E. S. Co., 23rd and Valdez Sts., has been opened by Fred Gaine, Frank Elliott, Curtis Schmidt, to specialize on Cadillac repairing.

Sebastopol, Cal.—Sebastopol Battery Shop has leased a fine new building, 54x80 feet, to be built on Santa Rosa Ave.

Sonoma, Cal.—E. L. LaMont has opened LaMont's Auto Repair Shop on the state highway.

Vacaville, Cal.—Oscar N. Madson and A. Klotz have taken over Nay Garage and will handle accessories in addition to repair work.

Milwood, Cal.—Ray M. Neikirk has occupied his new building, Main and Spring Sts., handling a garage business and accessories.

Palo Alto, Cal.—E. F. Oswald has been made manager of the Walter G. Bernthal Ford Garage.

Hollister, Cal.—Chappell Motor Co., Buick agency, has taken the Samson truck agency.

San Jose, Cal.—A. E. F. Garage, F. E. Granger, manager, has taken the Kissel agency for Santa Clara County.

San Rosa, Cal.—W. Raymond Todd has sold his interest in Todd's Garage, 110 Davis St., to H. M. Anderson, who will conduct it as Davis Garage

Benicia, Cal.—Benicia Garage has been enlarged to double its former size, and will continue the Ford and Fordson agencies.

Ukiah, Cal.—W. J. Allard has bought the tire shop of I. W. Fish, and will continue it as Allard Tire Sales & Repair Co.

San Jacinto, Cal.—Record Garage, headed by W. L. Record, has taken the Ford and Fordson agency for this locality.

Walnut Creek, Cal.—Highland Mfg. Co., Chicago, has bought a large tract of land here and will erect 20 or more cottages for employes and later a Pacific Coast branch factory for manufacture of its line of automobile accessories.

Martinez, Cal.—Martinez Garage & Machine Shop has been bought by F. J. Mathes, J. E. Searles and A. DeSilva.

Livermore, Cal.—A. F. Young has opened Stage Center Garage on Altamont Road.

Antioch, Cal.—Roy Griffiths has sold Griff's Service Station to H. A. Roberts in exchange for Roberts' interest in O. K. Garage.

Yuba City, Cal.—C. E. Rimmer has opened Rimmer Welding & Radiator Shop in Red Dowell's Garage.

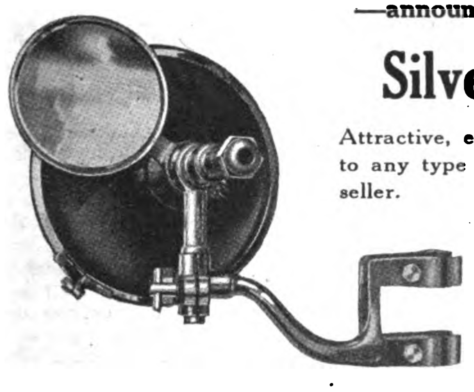
Woodland, Cal.—Hiatt & Miller of Main St. Garage will erect an addition containing 11,000 square feet to accommodate business expansion.—F. E. Richter and R. F. Wilton of Crocker Electric Shop have installed equipment to manufacture complete storage batteries under Crocker trademark.—Electric Garage will build an addition to increase its floor space 33 per cent.

Sacramento, Cal.—Flint Motor Co., Maxwell and Chalmers distributor, has opened a salesroom at 1220 K St.

Santa Rosa, Cal.—A. L. Tisserand, former operator of Fourth St. Garage, has opened his new garage at 888 4th St.—Shower Brothers have bought Hicks & Webb Paint Shop, 416 Wilson St.—Violetti Brothers, Hudson and Essex agency, have opened their own service and repair business on these cars.

Vallejo, Cal.—H. A. Boelhauf has bought the local automobile top branch business of Breish & Dabner; Jesse Dabner rejoins his partner at the Petaluma branch.

Pittsburg, Cal.—D. A. McVay, former owner of Central Garage, has bought back R. G. Harvey's interest, and it will be conducted as McMullen & McVay Garage.



—announcing the new closed car model

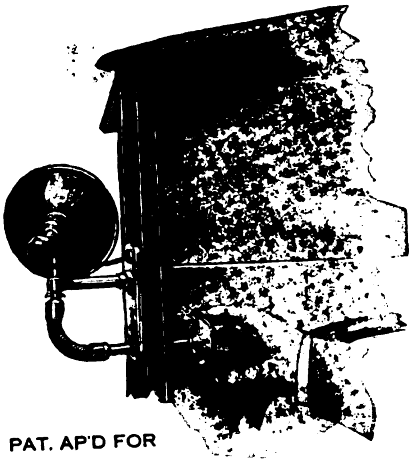
Silverbeam Spotlight

Attractive, easily operated, useful and ornamental to any type closed car. List price $10—a quick seller.

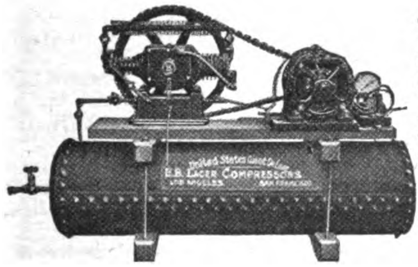
Jobbers and Dealers: We have a liberal proposition for you. Write today for full particulars.

Full Details on Request

Chas. Kaufmann & Sons, Inc.
Santa Ana Calif.



PAT. AP'D FOR



The same reliable U. S. Compressors.

Reliable 10 years ago.

More reliable Today.

**Many copies appear in the market but only one original.
The best with patented features**

E. B. LACER

Air Compressors Electric Motors
Los Angeles San Francisco, Cal.
1224 East 8th St. 401 Van Ness Ave.

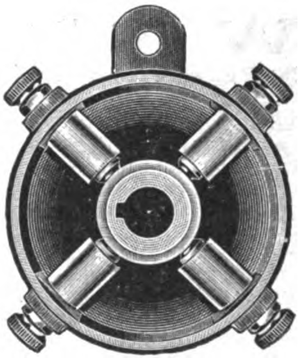
DALECO
Trade Mark Registered

TIMER
FOR FORD CARS

You Buy a Car for Comfort and Service — Tires for Mileage and dependability —When you buy a Daleco Timer you buy guaranteed Timer Service at 50 Cents per year.

Write our sales department today for full details

Sales Department
The Zinke Company
1327 Michigan Ave., Chicago



Manufacturers
The Dale Mfg. Co.
1323 Michigan Ave., Chicago

GRAMM
PIONEER
MOTOR TRUCK
LIMA, OHIO, U.S.A.

"The Recognized Standard of Quality"
A complete line from Speed Truck to 6 ton.

All attractively priced. Unusual selling features.
Strong dealer helps. Write for territory, discounts, etc.

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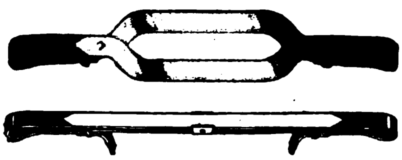
Lima, Ohio, U. S. A.

What the Dealer Gets in the NEW ERA Bumper Line



1. As good looking bumpers as the best.
2. Our permanent guarantee of replacement of damaged parts or the whole bumper.
3. Underwriters approval, carrying lower collision insurance rates.
4. Values that meet all competition.
5. Interchangeable bars. Attaching arms exchanged free. No DEAD STOCK.
6. Fast turn over. Good profits. The prestige of selling dependable goods.

Write for Catalog.

NEW ERA SPRING & SPECIALTY CO.
73 Cottage Grove Ave. Grand Rapids, Mich.
GRAF SALES CO., Williams Bldg., San Francisco, Calif.
Also Springs, Visors, Tire Carriers

MORELAND
MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST

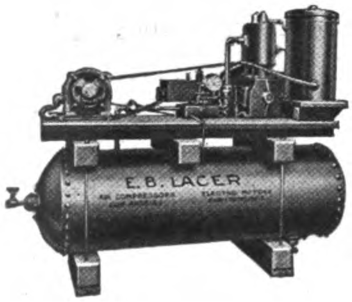
Motor Wheel
PRODUCTS

Gier Tuarc Steel Wheels Gier-Lewis Steel Wheels

Gier Stampings

Wood Wheels for Cars and Trucks

MOTOR WHEEL CORPORATION - LANSING, MICHIGAN



High Pressures Big Volumes
IS THE CALL TODAY
If it is Compressed Air 1 to 80 cu. ft. of air per min.
See E. B. LACER
Air Compressors
Electric Motors
Los Angeles
1224 East 8th St.
San Francisco, Cal.
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WANTED!
A Permanent Job on Your Ford Car
Applicants are the ARG Auxiliary Spring and the ARG Fender Braces. They come highly recommended by thousands of Ford owners for whom they have cut down depreciation, added to riding comfort and prolonged the car's life.
The ARG Auxiliary Spring is a combination front spring protector and shock absorber, costing only $4.00. ARG Fender Braces, either front or rear, cost $2.50 and definitely end fenders cutting tires and rattling. Put these competent, reliable accessories to work on your commercial or passenger car *today!*
Be sure to ask your dealer for ARG accessories by name. ARG accessories must make good or we will.
ARG AUXILIARY SPRING CO. *Mfrs.* Birmingham, Alabama

SOUTHERN ENGRAVING AND COLORTYPE CO.
Our Artisans and Equipment Rank Second to None West of Chicago
ALL WORK GUARANTEED
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SCANDINAVIA
Trade Mark Registered in U. S. Patent Office
BRAKE LINING FOR FORD CARS
SCANDINAVIA is woven from selected, long staple cotton on looms especially designed for FORD brake and transmission lining. Weighs 25 to 35 per cent more than other linings—which means more yarn, more body and more actual value.
Send for illustrated booklet and our Attractive Jobber or Dealer Proposition
SCANDINAVIA BELTING CO.
106-108 Reade St., New York City
Branches—Atlanta, Cleveland, Los Angeles, Portland, Boston, Chicago, Easton, Pa., Pittsburgh, San Francisco

Richmond, Cal.—J. P. Strom, MacDonald Ave. and 13th St., has taken the Hudson and Essex agencies for western Contra Costa County.—Frank A. Scholes, former owner of the Nash, Overland and Willys-Knight agencies recently conducted by Freese Motor Car Co., has bought back the business from Charles F. and Louis Freese.—West Side Garage has been reopened by V. H. Schof and L. E. Hale.

Berkeley, Cal.—F. H. Dailey Motor Co. of Oakland, Chalmers and Maxwell dealer, has opened a branch here, Shattuck and Durant Aves., F. H. Fuller manager.

Santa Cruz, Cal.—Santa Cruz Auto Sales Co., Chalmers and Maxwell dealer, has doubled its floor space at 12 Soquel Ave. by adding adjoining stores for sales rooms.

Paso Robles, Cal.—Jack Blackwell has opened Blackwell Garage in the new Rude Bldg. on 13th St.—R. E. Dalrymple has sold Park Garage to Maerhan & Tucker, Chevrolet dealers, and has bought the Hobbs Battery Service Station, located in Ward's Garage on Railroad Ave., from R. S. Mulhall.

Los Gatos, Cal.—W. H. Main has sold Automotive Machine Shop on East Main St. to E. A. Gowan and O. W. Keller.

Mountain View, Cal.—Hills-Chard Products Corp. has been formed by W. F. Hills and W. H. Chard to manufacture Ford and Chevrolet tire fillers and gasoline tank and oil gauges.

King City, Cal.—W. J. Hamilton has bought the interest of his partner, F. E. Gause, in El Camino Garage.

Santa Maria, Cal.—Victor A. Bello, Jr., has bought Lloyd & Lloyd Garage from Mr. and Mrs. F. C. Lloyd.—H. & J. Tire Shop has been opened at 200 S. Broadway by A. R. Horn and E. Jackson.

Ventura, Cal.—C. S. Cassell and R. L. Lunsford will open C. & L. Tire Shop, Main St. and The Avenue.—Ned Strong has sold his interests in Strong Brothers Garage to his brothers, George and Cortland Strong.

Oxnard, Cal.—Hutchinson Motor Co., headed by Paul Hutchinson, president, with headquarters here, now has branches at Ventura, Santa Paula and Fillmore; it employs 26 persons on a $100,000 annual payroll, and in 2 months has sold 75 cars.—Benjamin Kimball has sold his interest in Kimball & Jones to his partner, Millard F. Jones; the firm name is now Millard F. Jones, Inc., Tire Distributor.

Moorpark, Cal.—Parr Brothers have occupied the new Simi Garage.

Van Nuys, Cal.—Packer Auto Co., Glendale, has opened a branch sales room here.—Richardson Johnson, Oldsmobile agency, has opened in R. R. Edwards Block on Sherman Way.

Glendale, Cal.—W. H. Hooper & Co., 222 E. Broadway, has made A. S. Knox manager of Vesta storage battery department.—Pellegrini Bros. Garage, 1321 San Fernando Road, has been opened by Pietro and Rodolfo Pellegrini.—J. H. Sherman has taken over the battery department of Triangle Garage, 1528 San Fernando Road.—Helms Motor Co., 233 S. Brand Blvd., has been opened by C. A. Helms.

Huntington Park, Cal.—Kilgore & Sopp have become Chevrolet dealers.—Harry Hillier, 211 S. Pacific Blvd., has taken the Hudson and Essex agencies.—Charles G. Boster has sold the accessory department of Pacific Auto & Supply Co. to Charles Marcellus, and will concentrate on Buick sales.

Watts, Cal.—Foster & Foster have been made Coast tire agency here.

Hawthorne, Cal.—C. W. Cowan has taken charge of Hawthorne Garage & Service Station, Broadway and Hawthorne St.

Torrance, Cal.—F. M. Tourtelotte has sold Day & Night Garage to James Jenkins.

Redondo Beach, Cal.—D. M. MacKenzie has taken over Chevrolet Agency, 122 N. Catalina Ave., from M. A. Anderson.

Hermosa, Cal.—Victor J. Huff has bought the Chevrolet agency from J. N. Windley, Redondo and Hermosa Sts.—G. W. Tire Shop, 1227 Hermosa Ave., has been sold to H. H. Boyer and J. S. Surg.

Culver City, Cal.—Culver City Motor Co. has been opened on Van Buren St. by F. F. Thomasson.

Sawtelle, Cal.—Royal Motor & Accessories Co., Los Angeles, will erect a $100,000 factory here.

Gardena, Cal.—H. N. Griffin has taken the Buick agency here.—W. T. Spears has bought M. T. Boyer's interest in the Gardena Ford Agency.—F. D. Ray has opened a Ford and Lincoln car agency.

Lakeport, Cal.—J. A. McFadyen of A & A Garage has sold it to C. A. Anderson and F. R. Ralfe.

Chico, Cal.—T. B. Green has bought J. F. Cheshire's half interest in California Storage Battery Co. on 2nd St.; Green was a former battery maker in San Diego.—M. S. Strauss of Oaks Garage has leased the business to G. W. Kelly.

Marysville, Cal.—Lee Osborne has bought Tucker Garage, 7th and B Sts., from Jack Tucker.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON RINGS PISTON RINGS

OIL KONTROL
PATENT APPLIED FOR.
RINGS
CONTROL the OIL CONTROL your TRADE
QUALITY Largest Profit RELIABILITY
All distributors for the genuine and original OIL KONTROL Piston Rings are appointed direct from the factory. Samples furnished jobbers and distributors
SUNSET MANUFACTURING CO., 1328 East Sixth Street
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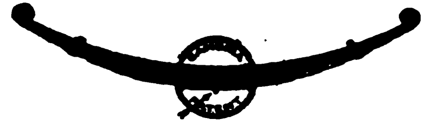
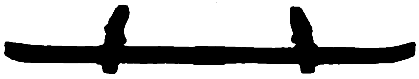
SPRINGS

CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS



"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof



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High Grade Hickory Wheels
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HOWARD AUTO CO

1323 S. Flower St. Los Angeles

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

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ONE PIECE
HIGH POWER PISTON RING

A LIFE SAVER FOR REPAIR MEN
Used by the fastest racing drivers on the track. Very liberal discount to the trade. Write for literature, prices, free samples and sales proposition.
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Distributors for So. Calif. and Arizona
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SCORED CYLINDERS
In auto and all internal combustion engines can be repaired easily and permanently without heating or machining with STAR BRAND SCOREFILLER. The Scientific Synthetic Gritless metal cement. Hundreds of satisfied users. Guaranteed. $3.50 per box. Postpaid.
BRADY-ADAIR COMPANY
Distributors
574 Golden Gate San Francisco

"Buck" Weaver Leaves Star Co.

O. L. ("Buck") Weaver has retired from active association in Star Rubber Co. He first left the company on June 1, 1921, due to ill health, but was again drawn into its activities on March 1 of this year .

Mr. Weaver has been a large factor in the Star since its reorganization in 1916, first as its secretary, later as vice president. During the war he spent considerable time in Washington in the interests of the smaller factories, with the War Industries Board. Later he was in the Motor Transport Corps work, and subsequently was a member of the executive committee of the tire division of the Rubber Association. He entered the industry in 1899, first with Diamond, and later with Goodyear for ten years. He represented Pierce-Arrow five years in Northeastern Ohio. His future plans are incomplete, but his efforts doubtless will be continued in the automotive field.

* * *

Building Star Plant in Canada.

A contract has been awarded by the Durant Motors of Canada, Ltd., for new buildings at Leaside, Ont., to cost approximately $1,000,000. Work has started and the contract calls for completion by December 1. The new plant will have floor space of 500,0000 square feet and will be used exclusively to manufacture the Star car. Production for 1923 calls for 18,000 cars, 10,000 for domestic trade and 8000 for export.

* * *

McMillan Now With Kardex.

Recently A. G. McMillan ceased to be manager of the Mitchell branch in New York, and became sales director at the factory in Racine. Now he has joined the Kardex Sales Co., card index manufacturer. Mr. McMillan has evolved an efficiency system applicable in this industry. Its initial feature is the Kardex Business Control for Ford dealers.

* * *

First to Use New Canal.

The first shipment of automobiles via the barge canal from Buffalo to New York left Buffalo August 18 on four barges of the Seneca Transportation Co. There were 15 Maxwell 6 passenger touring cars, 1923 model, on each barge. The 60 automobiles left Detroit about noon on August 17 by boat for Buffalo.

* * *

Jefferson Rubber Co. Receivership.

Upon petition of creditors, Jefferson Rubber Co., manufacturing tires and other rubber goods at Jefferson, Wis., has been placed in receiver's hands. It is stated in the petition that of $75,000 in assets not more than 50 per cent is collectable.

* * *

Ford's Road Absorbs the T. & D.

Negotiations ended recently by which Henry Ford's Detroit, Toledo & Ironton Railroad acquired the Toledo & Detroit Railroad, formerly known as the Toledo, Ann Arbor & Jackson Railroad. It runs through Petersburg, Mich.

* * *

B. F. Wright Leaves Republic.

B. F. Wright has resigned as chief engineer of Republic Motor Truck Co. He formerly was with Federal Motor Truck Co. in a similar capacity.

* * *

Three General Motors V. P.s Return.

Alfred P. Sloan, Jr., J. J. Raskob and Alfred H. Swayne, vice presidents of General Motors Corp., has returned from an extended European trip.

AJAX advantages today are more evident than-ever. Ajax dealers aren't wondering today what the Ajax policy will be tomorrow. They know it will be the same fair, square way of doing business. The same generous consideration for the dealer.

Furthermore, the Ajax dealer knows, just as the Ajax user does, that Ajax prices are always the lowest prices at which real tire service can be sold.

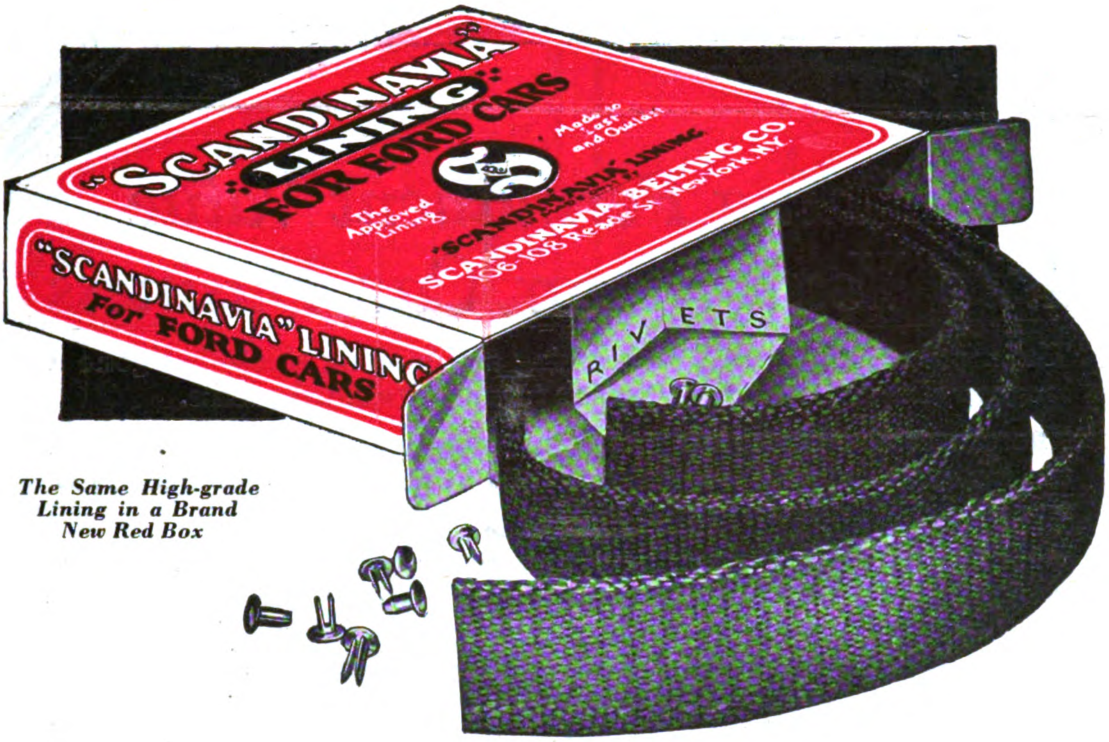
AJAX RUBBER COMPANY, Inc.
NEW YORK CITY
Branches in Principal Cities

AJAX
ROAD KING

AJAX ROAD KI

Ajax Cord Tire Ajax Truck Tire Ajax Paragon

There is an Ajax Tire to meet every service requirement


"SCANDINAVIA" LINING FOR FORD CARS
Made to Last and Outlast
The Approved Lining
"SCANDINAVIA" LINING
SCANDINAVIA BELTING CO. 106-108 Reade St. New York, N.Y.
"SCANDINAVIA" LINING For FORD CARS
RIVETS

The Same High-grade
Lining in a Brand
New Red Box

Scandinavia Brake Lining is Made Especially for Ford Cars

SCANDINAVIA has become the accepted lining for FORDS, because it has proven itself to be a lining that will deliver 100% service during a long life of hard usage.

Woven from selected, long staple Southern cotton on looms especially designed for FORD brake and transmission lining. SCANDINAVIA weighs 25 to 35 per cent more than other linings—which means *more yarn, more body* and *more actual value.* Especially impregnated, processed and hardened (to resist heat, oil and grit and yet remain sufficiently pliable) to prevent chattering or glazing.

SCANDINAVIA is put up in convenient boxes with the necessary solid brass rivets for fastening to the bands. Cut into three equal-length pieces for Low and High Speed, Reverse and Brake Bands.

Write for Our New Folder "How to Change Ford Brake and Transmission Linings." We Have an Attractive Proposition for Jobbers and Dealers.

SCANDINAVIA BELTING CO.

106-108 Reade St., New York, N. Y.

BRANCHES:

Atlanta	**Boston**	**Chicago**	**Cleveland**
Easton, Pa.	**Los Angeles**	**Pittsburgh**	**Portland, Ore.**

Building Permanent Value Into Your Motor Car Business

The motor car business—both selling and making alike—has gone a long way beyond the stage of quick turns and sudden profits.

The progressive motor car merchant today is as keenly interested in the ten-year future of his enterprise as in his balance sheet for 1922 and his individual outlook for 1923.

Without quality, performance and reasonable price in his car, he knows, no great volume of sales is now possible. And the value of his investment and his community good will, he realizes, is equally dependent on the maintenance of this winning balance indefinitely.

The character of the factory organization behind your car, therefore, is doubly important. Stability and experience, a sound financial position and adequate production facilities are essential both to your present profits and your future prosperity.

On this basis, the Stephens organization invites you to make an immediate and searching study of its motor cars, its three great factories, its efficient production methods and exceptionally strong financial situation.

Stability has marked Stephens policies from the first. In design, the current models are developments of the models which have gone before. No radical changes have been made; only improvements have been made in quality. Back of every important decision has been the authority of fifty-five years of experience in making and merchandising articles of utility and character.

You cannot conceive the dependable worth of the Stephens Six and the permanent value of the Stephens franchise until you have seen the Stephens plants and watched Stephens men building Stephens cars with a care and fine craftsmanship only a few high-grade automobiles now receive. Write for our contract terms and catalogue of body types. And plan an early visit to Moline.

R.W. Lea
Vice-President and General Manager

STEPHENS MOTOR CAR COMPANY, Inc.
Executive and Sales Offices, Moline, Ill. Factories, Freeport, Ill.

STEPHENS
MOTOR CARS

Nine individual body types—$1575-$2550, f. o. b. Freeport

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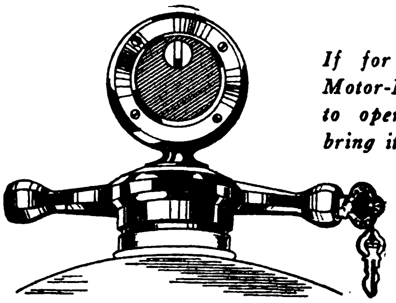
NOVEMBER
1st and 15th
Los Angeles Show Numbers

These two issues will be largely devoted to a resume of automotive trade conditions in Southern California, the greatest 365-days-in-the-year sales territory in the United States.

Advertising copy for November 1st issue can be handled up to noon October 31st. The deadline for November 15th will be the last mail November 13th.

Motor West Publishing Co., Inc.
911 Marsh-Strong Bldg., Los Angeles, Cal.



If for any reason the Fletcher Motor-Meter Lock on your car fails to operate at 100% satisfaction, bring it to us and let us inspect it.

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Fletcher
Motor-Meter Lock
$6.50 everywhere

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You can put them on and take them off *in a hurry!*

Either the complete chain or a cross chain

You can take off and put on a cross chain *in a hurry*. The patented slip-on link does it. A child can make the change.

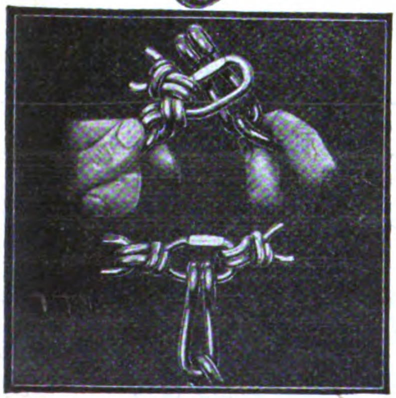
You can put on or take off the entire chain *in a hurry*. The patented, positive lever lock does it. *Also takes* up the slack and saves wear on tires and chains.

And yet these chains cost no more.

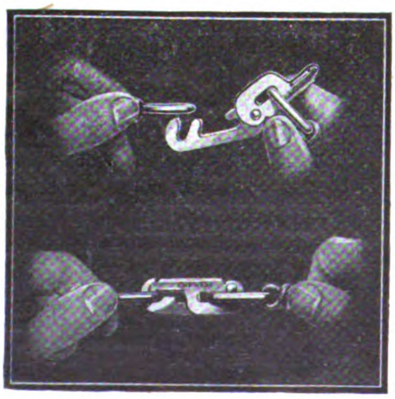
These two features make OFF'N'ON Chains rapid sellers.

Your jobber will supply you. Order now.

It is a good idea to order spare cross chains at the same time, because you can sell a set of cross links with every chain.



Note the clever slip-on link



Note the leverage of the positive lock that takes up the slack

PYRENE MANUFACTURING COMPANY
Makers of Pyrene Fire Extinguishers
520 Belmont Avenue, Newark, N. J.

Branches:

CHICAGO	ATLANTA	KANSAS CITY	SAN FRANCISCO
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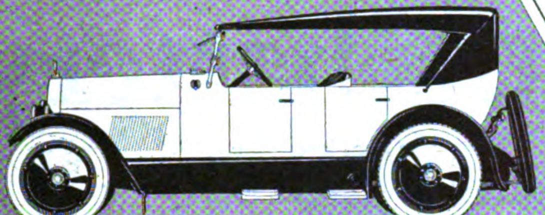
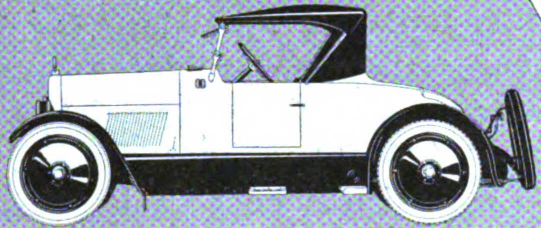
Outstanding among the greatest motor car values of the year—

The HAYNES 55

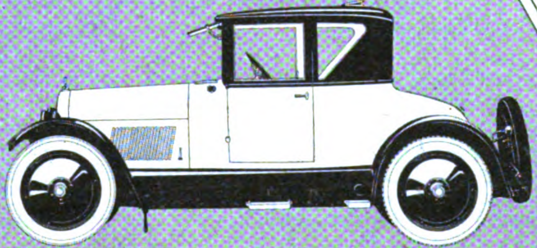
The lasting success of the new, improved Haynes 55 rests upon its proved, established worth as "the value of values" in automobiles. The illustrations show how these cars meet the wishes of the motorist in either open or closed types. With the sturdy, Haynes-built, light six engine, its power plant leaves nothing to be desired. In design and finish the Haynes 55 models respond to the exacting wishes of those who insist upon beauty, attractiveness and service. Inspect these cars, and your judgment will confirm that of every owner of these unusual productions of the great Haynes factories at Kokomo.



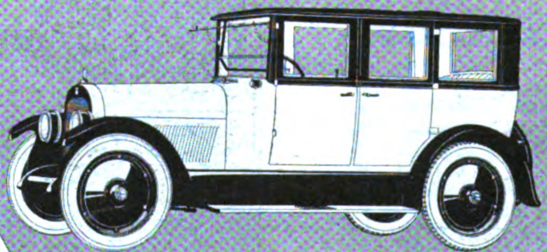
The New, Improved Haynes 55 Touring Car, 5-Passenger, $1495



The New, Improved Haynes 55 Roadster, 2-Passenger, $1545



The New, Improved Haynes 55 Coupelet, 3-Passenger, $2095



The New, Improved Haynes 55 Sedan, 5-Passenger, $2595

$1495

to $2395

F. O. B. FACTORY

With its 121-inch wheel base, its strong chassis, its unrivalled mechanical equipment, its thoroughly modern accessories, and its sweeping body lines in every type, the Haynes 55 instantly responds to the ideas of the buyer who demands the utmost in value for a truly economical price. The 32x4½ cord tire equipment, the leather upholstery, the Haynes electric button starting system—all these up-to-date touches—make it even more desirable. Its record, ever since it was introduced, is one of steadily increasing favor. If you are a dealer with a successful record, and are interested in finding a car and territory which give you still greater opportunity, we suggest that you get in touch with us. Write, wire or telephone. Interviews will be arranged in confidence if desired. In writing or wiring, address Dept. 1049.

THE HAYNES AUTOMOBILE COMPANY
Factories and Offices: Kokomo, Ind., U. S. A.
EXPORT OFFICE: 1715 Broadway, New York City, U. S. A.

Disc wheels are optional equipment on all the new, improved Haynes 55 and 75 models, at no extra charge.

HAYNES
Character Cars 55

PREST-O-PLATES have opened the eyes of Car Owners to this vital fact:-

the life of the battery is in the plates.

The long-lived plates, Prest-O-Plates, *naturally* make Prest-O-Lite the long-lived battery.

Possessing great heat-resisting durability for hot summer driving, and ready reserve power for winter weather starting, Prest-O-Plates *naturally* make Prest-O-Lite the best all-around, all-weather battery. Here is the net of selling the best battery:

Choose Prest-O-Lite with Prest-O-Plates. They are found *only* in a Prest-O-Lite battery.

THE PREST-O-LITE COMPANY, INC.
Eighth and Brannan Streets, San Francisco, California
Main Office: 31 East 42nd Street, New York
In Canada: Prest-O-Lite Company of Canada, Ltd., Toronto

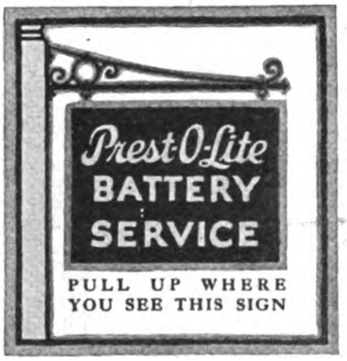
To Dealers: We have a better battery proposition—more profit for you—more and better satisfied customers. Write us.

To Battery Service Stations: Are you making money? Many Prest-O-Lite Battery Distributors have our valuable gas and appliance franchise—*two* profitable lines. Write us for particulars.

To Responsible Business Men: Do you need another profitable line to make a satisfactory profit? You may be qualified to represent us. If you are looking for a permanent profitable business in which to invest your money and energy, here is your opportunity.

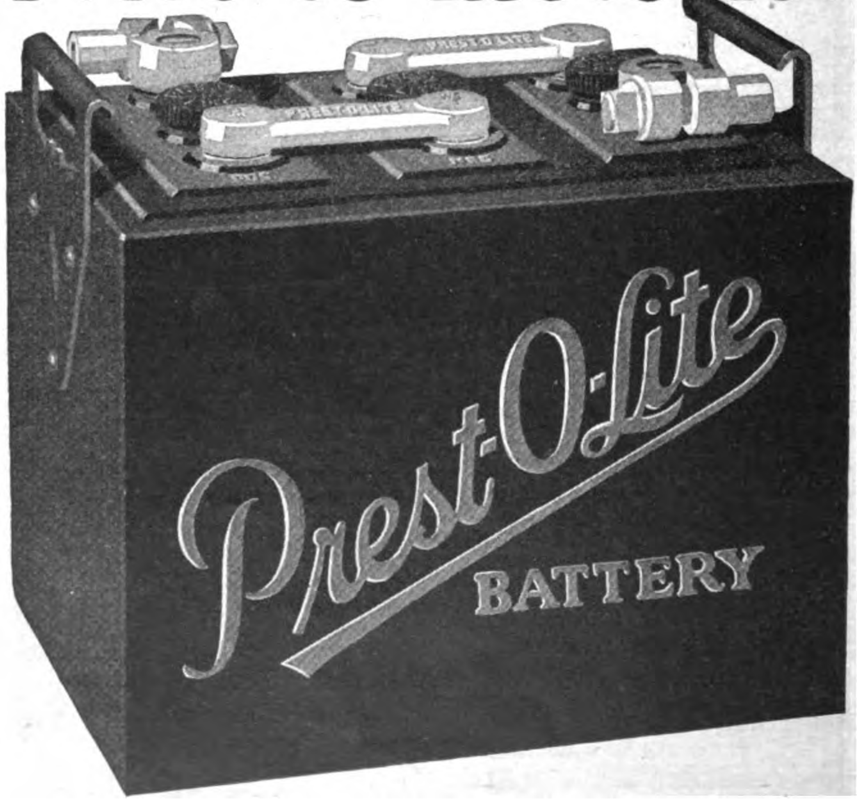
Write us for open territory.

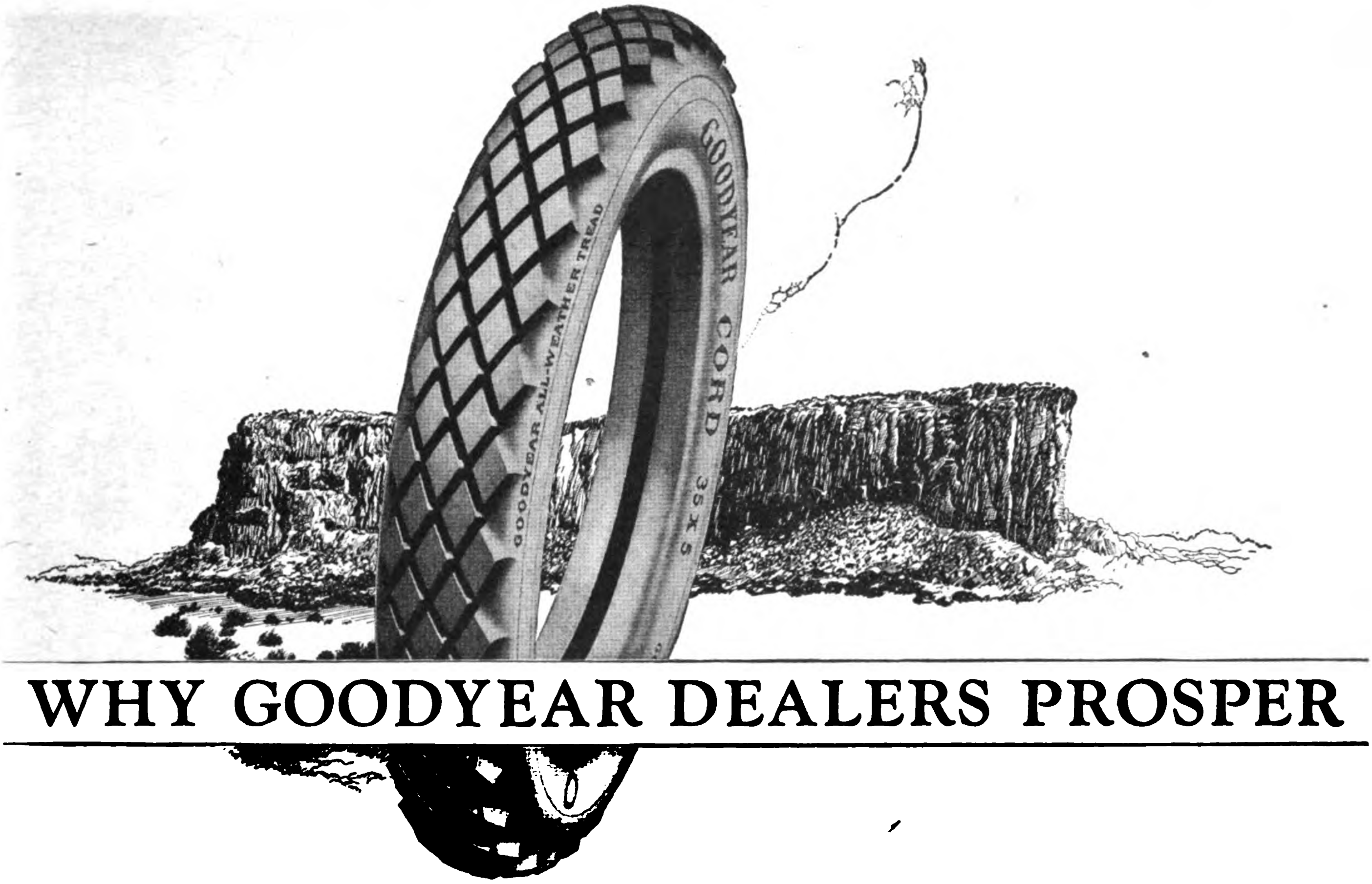
Oldest service to motorists



"INSIDE THE BATTERY"

An unusual book explaining how a battery is made, how it works, and how to take care of it. We have a free copy for you. Write for it.





WHY GOODYEAR DEALERS PROSPER

Every assistance a manufacturer can give his retailers is offered to Goodyear Dealers in fullest measure.

First, the Goodyear Dealer gets a complete line of tires; tires for every car and at prices to match every customer's purse.

The Goodyear Dealer shares in Goodyear's long-established reputation for honest dealing in honest merchandise.

All of Goodyear's effective and consistent advertising works for Goodyear Dealers. Goodyear supplements this strong sales assistance with every sort of auxiliary advertising for the dealer's personal use. Signs and letter service of a type that sell tires are also available to Goodyear Dealers.

But not the least important phase of Goodyear assistance is the sound merchandising counsel every Goodyear representative is qualified and ready to give to his group of dealers.

If you sell, or intend to sell, tires or automobiles, and want to enjoy the advantages of being a Goodyear Dealer, write today to Goodyear, Los Angeles, California or Akron, Ohio.

Goodyear Means Good Wear

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

Ask—

Walter M. Brown, *Los Angeles*
Bert Latham, *San Francisco*
P. D. McLaughlin, *Oakland*
W. Edward Shaw, *San Diego*
J. W. (Jim) Parsons, *Seattle*

why they see such big possibilities for the Stutz on the Pacific Coast at this time and you will learn why you should make every effort to get the franchise for your section if it is still available.

THE CAR THAT MADE
STUTZ
GOOD IN A DAY

They Know What Its Future Holds

Why have Walter M. Brown, *Los Angeles;* George Abernathy, *Memphis;* Bert Latham, *San Francisco;* Ed Updyke, *Indianapolis;* and other leading automobile dealers—who were identified with Stutz in the days of its earlier successes—welcomed the chance "to get back in the family" again?

Why are Parkinson, *New York;* Becker, *Boston;* Blocksom, *Philadelphia;* Glossbrenner, *Louisville;* Brunton, *Cincinnati;* Norwood, *Baltimore;* Thomas, *Cleveland;* Schaefer, *Wheeling;* Hoeveler, *Pittsburgh;* Graves, *Nashville;* Baughman, *Akron;* Abbott, *Atlanta;* Kaeser, *Hartford;* Andrews, *Providence;* Prince, *Washington, D. C.;* and a host of others, backing their confidence in the Stutz with the most aggressive efforts in the history of their long connection with the company?

The Stutz is on the threshold of another great era of prosperity. It has made fortunes for its dealers in the past. History is about to repeat itself!

All of the vast financial and industrial resources of the company are focused on developments destined to outrival any previous achievements of this organization.

No more profitable opportunity exists today for a permanent connection with one of the real factors in the industry affording a line of cars as representative as any built in this country.

If you have not investigated the Stutz—if you are not informed on present Stutz developments—write today.

STUTZ

STUTZ MOTOR CAR COMPANY OF AMERICA, Inc.
Indianapolis, Indiana, U. S. A.

WIRE WHEELS

—and the advantages they provide for the car owner

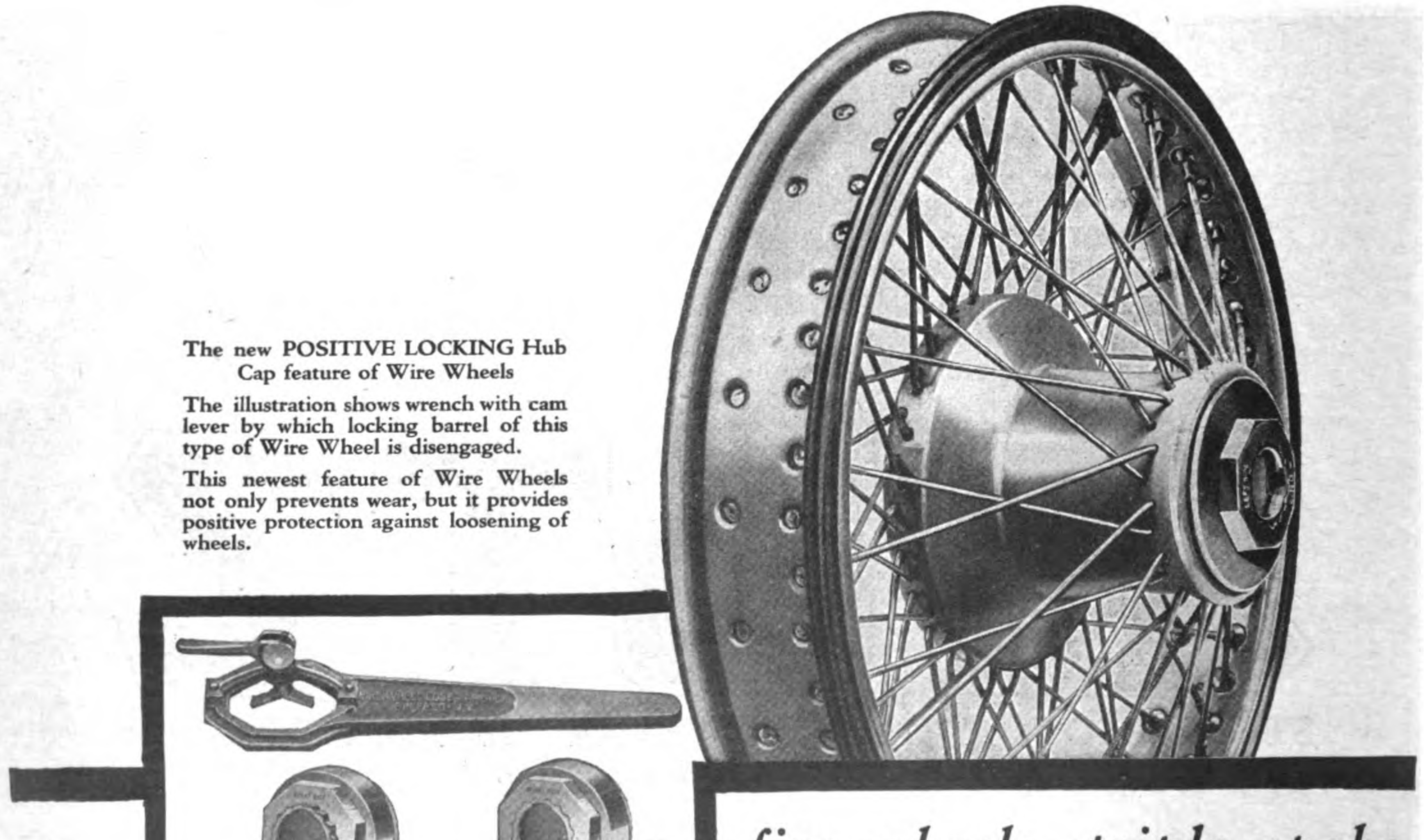
When a car manufacturer designs a particularly smart model—something of a DeLuxe nature—he invariably equips it with Wire Wheels. Not only because Wire Wheels enhance the attractiveness and distinctiveness of the car, but because:

- —they provide the utmost in easy-riding qualities and comfort for the passengers;
- —they provide the motorist with a tire-changing convenience that makes motoring more enjoyable;
- —they provide advantages that insure greater mileage from tires and, therein, save money for the car owner;
- —they provide greater safety for the passengers by reason of the extreme strength of the triple rows of spokes.

WIRE WHEEL CORPORATION OF AMERICA
1700 Elmwood Ave., Buffalo, N. Y.

Direct Factory Branches and Service Stations:

New York—835 11th Ave. at 57th St.
Philadelphia—328 North Broad St.
Chicago—2900 So. Michigan Ave.
Detroit—433 Leland Street
Los Angeles—1216 S. Grand Ave.
San Francisco—1690 Pine St.



The new POSITIVE LOCKING Hub Cap feature of Wire Wheels

The illustration shows wrench with cam lever by which locking barrel of this type of Wire Wheel is disengaged.

This newest feature of Wire Wheels not only prevents wear, but it provides positive protection against loosening of wheels.

five wheels, triple spoke, detachable at hub

Firestone Co

Thousands of Successful Dealers Prize Its Sustained Quality

THE Firestone Gum-Dipped Cord occupies a position only attained after years of sustained quality. Thousands of successful dealers know it as a tire that is unvaryingly dependable.

They have come to realize that this is an integral factor in building a sound, permanently profitable business. Each season has increased their faith in its remarkable value.

Study its construction, and you will understand why tire after tire performs with uniform reliability. Superior equipment, standardized methods and rigid inspections during every step of production prevent any possible lessening of the quality standard.

Such processes as double gum-dipping, air-bag curing, and rubber blending and tempering give added strength and greatly increased mileage.

The popularity of Firestone Gum-Dipped Cords is being demonstrated this year as never before. The demand in the past few months sets a new record.

You, too, will value their high quality—selling now at the lowest prices in history—if you join the ranks of successful Firestone dealers and make Firestone Gum-Dipped Cords the foundation of bigger sales.

Most Miles per Dollar

Firestone

GUM-DIPPED CORDS

Direct Proof of the Red-Top as a Business Builder

The letter printed below is authentic evidence of the business-building prestige of the Fisk Red-Top:—

Cokato, Minn., July 6th, 1922.

Fisk Tire Company, Inc.,
Minneapolis, Minn.

Gentlemen:—

I want to tell you what Red-Tops have done to help my business.

In the first place, they stand up. I have yet to see a dissatisfied user and when I can sell one to a customer I know that in time I will have all his tire business and that he will tell his friends, that the Red-Top is the cheapest tire per mile.

The Red-Top business in this town is MY business. Every one of them in use is an advertisement for me and I find them easy to sell. We do not handle any cheap tire as I know we are giving the customer more for his dollar in Red-Tops, besides building up our reputation and that we will be doing business when the gyp dealer is gone.

These tires are averaging my customers around 15,000 miles on Ford cars.

Yours very truly,
Walter Harkman.

The extra ply of fabric and the heavy, specially compounded, tough red tread enable the Red-Top to give remarkably long service on small cars which travel rough roads or carry heavy loads.

There's an insistent demand for Red-Tops in every community—large or small—and the dealer who sells them has a profitable business which he owns, and cannot be troubled by "gyp" competition.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

THE FISK TIRE COMPANY, Inc.
Chicopee Falls, Mass.

Extra Ply of Fabric—Extra Heavy Tread
FISK
RED-TOP
CLINCHER TIRE

Trade Mark Reg U S Pat Off.
Time to Re-tire?
(Buy Fisk)

CLEVELAND SIX

THE WONDER CAR OF THE YEAR

Overshadows Its Field

In the new Cleveland Six Sedan buyers find the fullest measure of satisfaction in the four great essentials:

PRIDE—in the new smart style of its Fisher-built body, and distinctive beauty of line and finish—

PLEASURE—in its dynamic, responsive, flexible power and rare riding comfort—

THRIFT—in its new low price for extraordinary quality and in its remarkable economy—

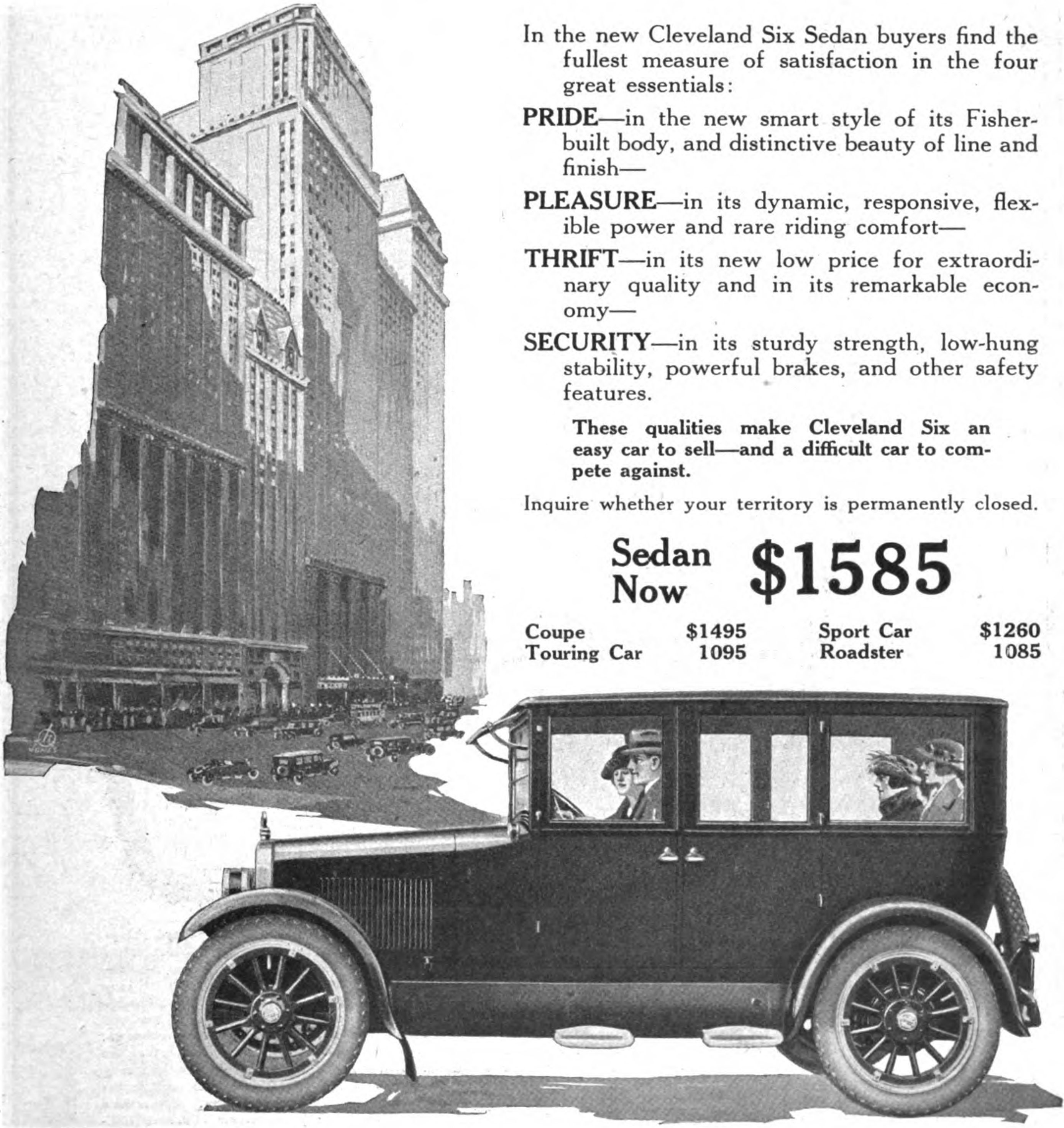
SECURITY—in its sturdy strength, low-hung stability, powerful brakes, and other safety features.

These qualities make Cleveland Six an easy car to sell—and a difficult car to compete against.

Inquire whether your territory is permanently closed.

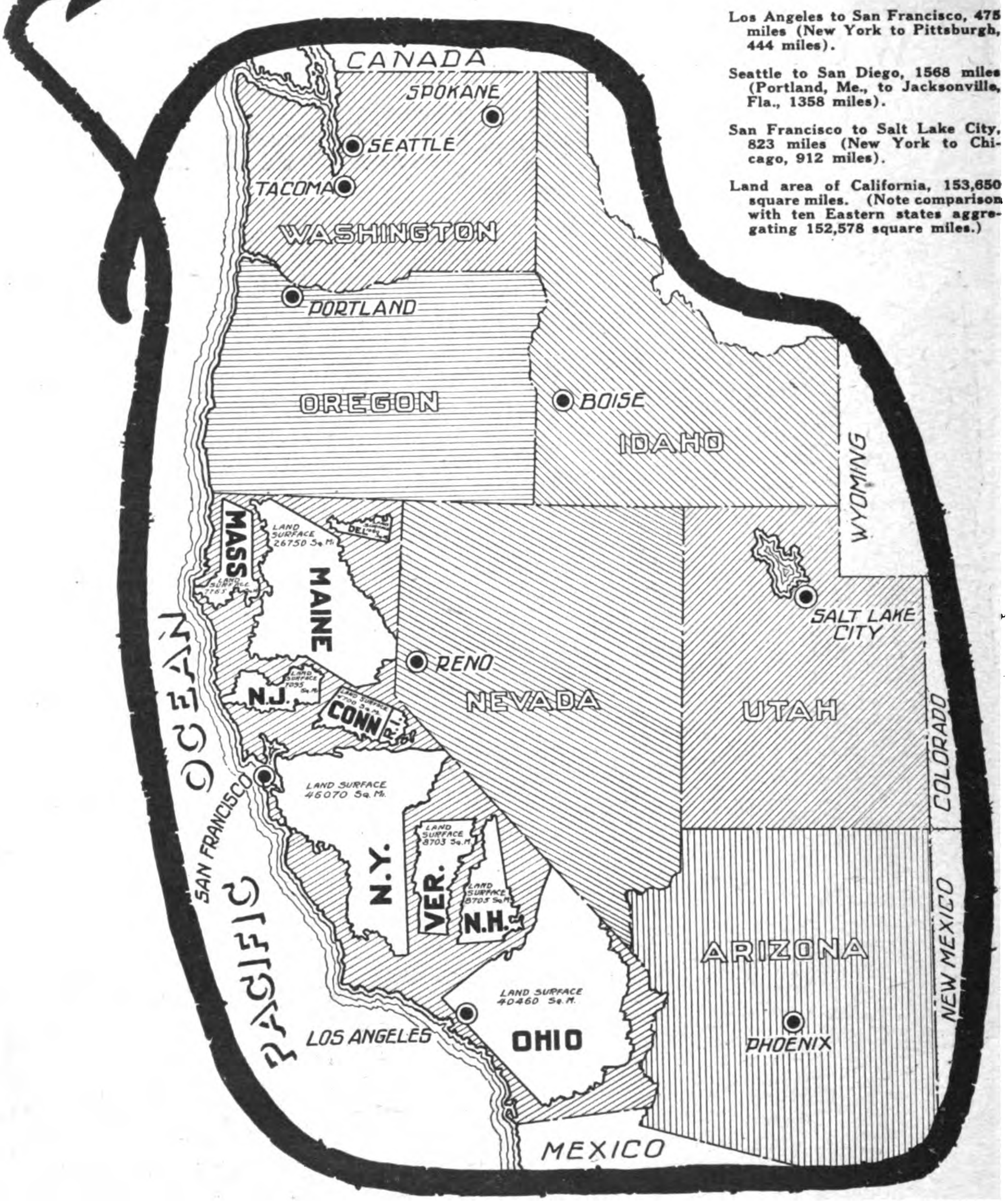
Sedan Now $1585

Coupe	$1495	Sport Car	$1260
Touring Car	1095	Roadster	1085



CLEVELAND AUTOMOBILE CO., Cleveland
Export Dept. 1819 Broadway, New York City. Cable Address "Cleveauto"

Motor West's Field—*An Empire in Itself*


CANADA
SPOKANE
SEATTLE
TACOMA
WASHINGTON
PORTLAND
OREGON
BOISE
IDAHO
WYOMING
MASS
LAND SURFACE 26750 Sq. M.
DEL.
MAINE
N.J.
CONN
R.I.
RENO
NEVADA
SALT LAKE CITY
UTAH
COLORADO
PACIFIC OCEAN
SAN FRANCISCO
LAND SURFACE 46070 Sq. M.
N.Y.
VER.
LAND SURFACE 8703 Sq. M.
N.H.
ARIZONA
NEW MEXICO
LAND SURFACE 40460 Sq. M.
OHIO
LOS ANGELES
PHOENIX
MEXICO

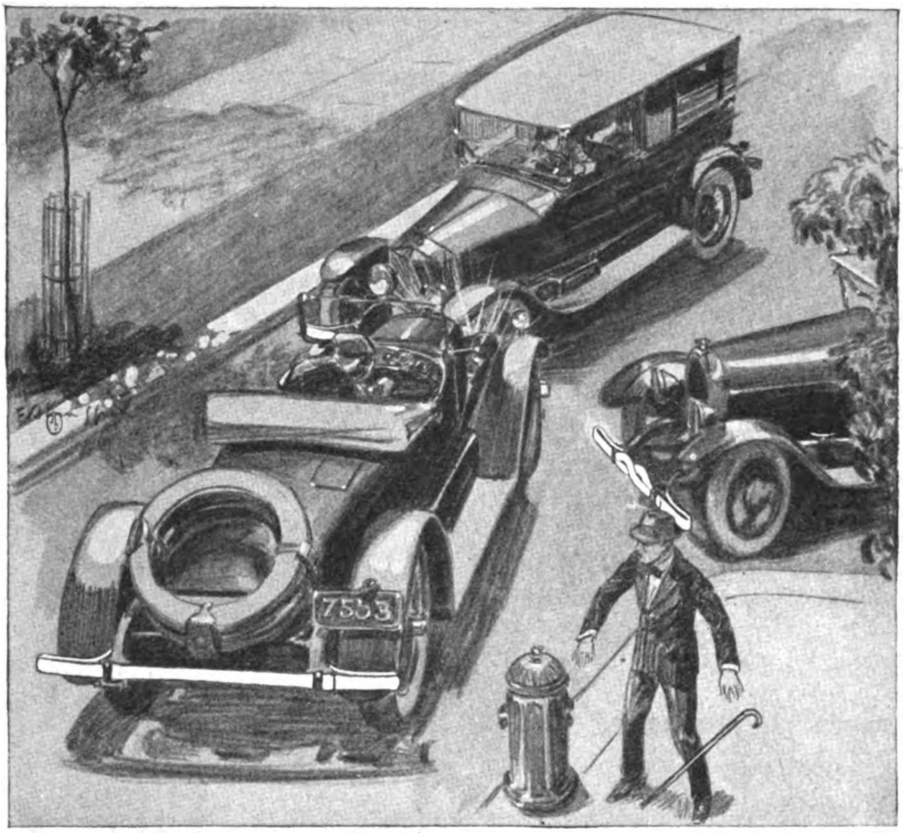
Los Angeles to San Francisco, 475 miles (New York to Pittsburgh, 444 miles).

Seattle to San Diego, 1568 miles (Portland, Me., to Jacksonville, Fla., 1358 miles).

San Francisco to Salt Lake City, 823 miles (New York to Chicago, 912 miles).

Land area of California, 153,650 square miles. (Note comparison with ten Eastern states aggregating 152,578 square miles.)

Motor West's field takes one-sixth of the product of the automobile and accessory factories of the United States. On the other hand it produces the great bulk of some of the foods and other commodities consumed by the rest of the country. In industrial production, note its ten-year increase in number of factories—86 per cent; in factory hands—97 per cent; in annual factory production—187 per cent. What Eastern plants do not adequately supply it, it soon will supply itself. Its raw materials, such as cotton, hides, etc., are as near to its manufacturing centers as those in the East are to factories there. Climate favors it, too—the Mare Island navy yard near San Francisco produces 25 per cent more than other navy yards, for the same labor cost. Living conditions are ideal, unemployment less, slums unknown, power is plentiful. The water power resources of 11 Far Western states total 42,850,000 horsepower; of the rest of the country, only 20,640,000. The installed capacity of these 11 Far Western states has only begun—in 1920 it was only 2,515,000 horsepower, of which California supplied 1,228,000; the Pacific Northwest 585,000; Intermountain and Southwest states 702,000; but by 1930 the total installed capacity of the region will be 5,352,000 horsepower. California's plans alone, for the decade, call for expending $500,000,000. To see the region's possibilities, consider that even 100,000 horsepower will run 1300 factories producing $140,000,000 in goods annually, and will serve also for very much more than that in irrigation, transportation and lighting.



Careless Driver Cuts Corner—CRASH!

CAR shoots out of side street! Driver on highway is too late to stop! A quick turn to the left—then, *crash* into the car coming in the opposite direction. But neither car is damaged. Both were Lyon-protected.

Lyon Spring Bumpers yield to every blow, like a spring. When struck, the Lyon-patented two-piece overlapping front bar and the open "looped-ends" absorb the shock completely instead of passing it on to the frame.

Lyon Spring Bumpers are guaranteed to take the full force of any blow at the rate of 15 miles an hour without injury to the car or its occupants. Then, too, insurance companies grant reduced rates on Lyon-protected cars. This saving will often more than pay the cost of bumpers for *your* car.

Lyon Spring Bumpers are beautifully finished, remarkably strong and perfectly balanced. They can be quickly attached without drilling or altering the frame by the use of the Lyon-patented hook-bolt.

Over a million in use. $10 to $25.

The Lyon trade-mark is on every genuine Lyon Spring Bumper. Accept no substitute.

METAL STAMPING COMPANY Long Island City, New York

Canadian Licensee, B. J. Coghlin Co., Ltd., Montreal, Canada

Lyon Straight Bar Bumper

Lyon Convex Bumper

LYON RESILIENT BUMPERS

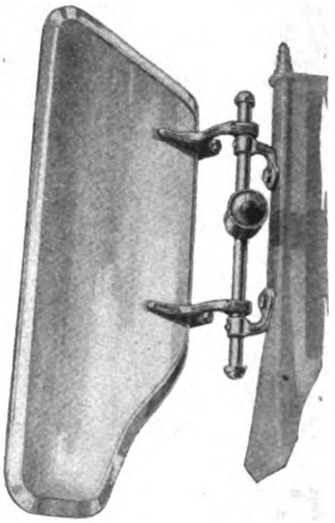
Introducing Ourselves

We're taking this means of becoming acquainted with you because we hope to become friends. We know we can serve you and you will be glad to see what we have. We're going to do everything in our power to please our friends, to serve them even better than they expect to be served—"to back every article we sell with a full and absolute guarantee."

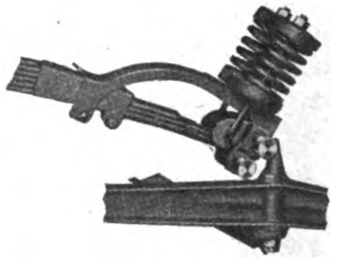
We are factory distributors for

3 necessities that *every* automobile owner NEEDS

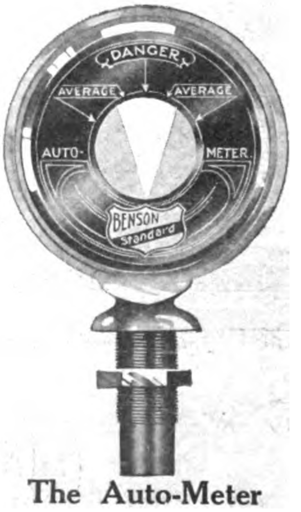
—accessories that we have chosen carefully from a big field. We sell them because they are head and shoulders above anything else in real value—highest quality at mighty low prices. The articles themselves are shown at the right. Let us send you detailed information about them.



Mercury Windshield Wings



Miller Spring Governors for Fords



The Auto-Meter

Dealers

You'll make big money by handling these articles. We will do everything we can to help you—create consumer demand, furnish dealer helps, give generous discounts, extend liberal credit.

We're preparing strong, compelling advertising campaigns for each of these articles, which will run in leading newspapers and magazines.

We're going to make a big success of this business of ours and we're offering you the opportunity of "getting in on it!"

Pulliam & Pulliam

1220 *South* Grand Avenue..... Los Angeles Cal
Phone 66626

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 12 OCTOBER 1, 1922 $3.00 PER YEAR

TO PLAN FOR MORE REGULATION UNITY

Pacific Region State Executives and Others to Meet in Portland and Try for Better Traffic Methods.

On October 9 and 10 there will be an important meeting in Portland of motor vehicle department heads, traffic officers, members of the judiciary and others from the Pacific Coast states, interested in traffic problems, to discuss ways whereby the states may be brought into closer harmony as to motor vehicle regulation.

The session has been called by Secretary of State Kozer of Oregon, acting in conjunction with L. D. McArdle, director of the Washington state department of efficiency. Invitations have been sent out to traffic officials, court officials, enforcing officers, the press, directors of automobile dealers' associations and heads of automobile clubs in Oregon, Washington, Idaho, Montana, Nevada, Utah, California and British Columbia, and an attendance of 100 or more, including leading executive officers of the states named, is expected.

The session at this time will be, in large measure, a continuation of a movement started two years ago, when traffic directors of the Pacific Northwest states met in Portland upon invitation of Mr. Kozer. At that time important steps were taken toward unifying the traffic laws and regulations of Washington, Oregon and Idaho, and noteworthy progress was made so far as Oregon and Washington are concerned. The outgrowth of the movement at that time was virtual unification, later, by the state legislatures, of the motor vehicle codes of the two states.

While that much is not expected to result in other states at this time, it is believed the coming meeting will bring about closer co-operation in handling traffic problems, which every day are growing more acute, and in cutting down the number of accidents, and in making motor traveling, by citizens of any of the states in other states, more pleasurable and safe. Among the subjects will be:

1. Motor vehicle lights and the need for uniform requirements.
2. State vs. county and city traffic control.
3. Co-operation between countries and states in the handling of the traffic problem (this referring to British Columbia participation).
4. Traffic conditions in Washington and need for co-operation.
5. Traffic conditions in Oregon and need for co-opreation, state and local. The province of the traffic officer.
6. Registration of motor vehicles of non-residents, and its value to the public in protection of persons and property.
7. The duty the public owes to the state in intelligent use of the highways.
8. The attitude of the courts with respect to traffic violations.
9. Automobile thefts, their treatment and theft reports.
10. Laws and why we have them.
11. Hand and arm and mechanical signals, and operators', drivers' and chauffeurs' licenses.
12. Uniform reports on traffic accidents, their necessity and how they may be obtained.
13. The province and accomplishments of the press in connection with traffic regulations.

Rain Falls on Coast.

This week, rains in the Pacific Northwest helped reduce the damage done by dunces who failed to realize that vast and terribly expensive forest fires develop from small neglected campfires and carelessly thrown "smokes," far more frequently than from unavoidable causes.

On the 26th, gentle rains fell in spots between Eureka, Calif., and San Francisco. Not enough, unless continued, to hurt the fruit crop, being dried, or the tomato harvest, now at its height.

Angelenos up late enough, September 28, saw silent lightning glows in a thinly clouded sky—and many were up late enough; it is getting to be a city.

Oregon Has Good Increase.

Oregon, on August 31, had registered 125,643 cars, an increase of 17,028 passenger cars and motor trucks, nearly 6 per cent, over the total on January 1, 1922. Automobile fees for the first 8 months of this year totaled $3,232,818, compared with $3,334,951 in 1921.

OREGON'S SECOND BIG SHOW OF YEAR

Portland Exhibitors Prominent at the State Fair at Salem—1923 Models Prove of Unusual Interest.

Oregon enjoyed its second important automobile show of the year at Salem, the state capital, during the last week in September, when Portland and Salem dealers, representing nearly all makes of cars sold in Oregon, had extensive displays in connection with the annual state fair. Owing to the statewide character of the event, the automobile division was of more than local importance.

A large proportion of the dealers and distributors who exhibited were of Portland, nearly every dealer of the Oregon metropolis having an attractive exhibit. This was possible because Salem is but 52 miles from Portland, on Pacific Highway, which is paved all the way. A large proportion of the visitors at the automobile section of the state fair were from Portland. In addition to the Portland distributors the leading dealers of Salem and several dealers of nearby points had displays.

The result was a comprehensive automobile display, second only in size and beauty to the Portland show held in January. A feature of unusual interest was the showing of cars of the 1923 series, received only a week or so before the show, and thus exhibited for the first time at the state fair.

An automotive equipment and accessory show was held also, Portland distributors, again, being responsible for much that was there.

Los Angeles Show, November 11-19.

C'mon, everybody, to the big tent at Praeger Park, Los Angeles, November 11 to 19. That is where and when the next show of the Motor Car Dealers' Association will be held.

TELLS THE WORLD OF COAST FUTURE

U. S. Commerce Bureau Chief's Report On Trip West Urges Eastern Makers to Open Assembly Plants.

Voicing an opinion obtained through a nationwide experience with the automotive industry, Gordon Lee, chief of the automobile division of the Bureau of Foreign and Domestic Commerce, in the Department of Commerce, has issued a very illuminative and interesting report, following his return to Washington after a month's tour of the Pacific Coast.

The possibilities for every line of industry west of the Rockies have impressed him profoundly, especially the high degree of concerted, organized effort in all branches of the automotive industry. Automobile men throughout the remainder of the country can well, and should, organize themselves along lines which have been proved successful by the large trade bodies found in California, Oregon and Washington, he says.

Mr. Lee also believes that assembly plants, for partial assemblage at least, should be established on the Coast by Eastern and Middle Western factories, to obtain lower freight charges, and stimulate their export trade with trans-Pacific countries by being thus able to offer better competition with European makers in those markets.

By partial assembly and packing in box car shipments, motor trucks could be laid down on the Coast for $30 freight charges, instead of the present frequent maximum of $200, is the opinion gathered by Mr. Lee from many prominent Coast jobbers and dealers.

"I want to set at rest," he says, "the feeling that there is such a thing as a saturation point in the sale of automotive products on the Pacific Coast. Developments are so rapid there that those dealers who are studying all phases and problems of their business are now to see in them the possibility of future sales expansion.

"National parks draw thousands of tourists monthly, and necessitate service requirements not found in the East at any point. I visited Crater Lake, Yosemite, Mount Rainier, and the Grove of Big Trees, and on every hand found machines from practically every state in the Union. One dealer pointed out that later, when these parks become crowded and tourists are turned away, there still will be many parks to be opened up, and service stations and equipment will be needed for them.

"With the Columbia River Basin project to be put forth in the state of Washington, 1,900,000 acres of fertile, irrigable land will be released, of such productive nature that every owner of one of the 120 acre plots will be in position in a year or two to purchase an automobile and accessories to go with it. The Colorado River project at Boulder Canyon will release waters to irrigate 3,500,000 acres, second in fertility only to Imperial Valley."

While in the Pacific region Mr. Lee journeyed by automobile from San Diego to Seattle, except for one short train ride, and a side trip into Yosemite Valley. He addressed practically every large dealer body in the three Coast states, concluding with the Spokane Automobile Chamber of Commerce.

"Western jobbers and manufacturers of automotive equipment," he says, "as a result of Automotive Equipment Association educational work, are strong for better business practices, and eliminating wastes from their methods.

"In San Diego a live dealers' organization exists which is not limited to dealers, but includes garage, repair and battery men, so there is being brought together, through the combined ideas of these men, a more complete understanding of the problems of automotive selling. The dealer no longer feels that the garage man and the battery man are merely a garage and battery man. There is a closer relation and co-operation, not only there but throughout California. This is due in large measure, no doubt, to the work of R. W. Martland, secretary of California Automobile Trade Association.

"Nowhere else in the country has a more complete organization been effected than in California—followed by Oregon, where dealer associations are occupying positions of importance to the business welfare of the entire community.

"Within the past year the Washington Automotive Trades Association has been organized, and under the guidance of President L. E. Titus of Olympia, much constructive work has been accomplished. The general state convention, July 21-22, at Olympia, was the best I ever encountered."

Concentration Counts—Jahns Proved It

In this country's very earliest automobile period, about 30 years ago, W. H. Jahns worked as a mechanic on all parts of cars, particularly the engines. For years, handicapped by crude methods, he reground engine blocks, made and fitted new wristpins, pistons and other internal parts. All the time he was thinking, and in 1912 he began concentrating—on pistons; nothing but pistons; semi-finished pistons of simplest general design, and of the quality found in the best cars and approved by the best engineers; pistons of purest gray cast iron, constructed to fit the type, weight and speed of each engine. In 1912, Jahns' output was about 150 pistons per day. Each year the output grow. About 3½ years ago it began to jump. Today it is about 2000 per day, comprising about 900 styles and sizes. About 40,000 are kept in stock constantly. Early in September a carload of about 10,000 pistons went to Oliver Van Horn Co., New Orleans. September 27, another carload of about 10,000 went to Washington Machinery & Supply Co., Spokane. About 90 per cent of the regrinding shops in the Western states use Jahns pistons for replacements, and there are distributors in other sections of this country and in Canada, Australia, the Philippines and the Hawaiian Islands.

W. H. JAHNS PISTON PLANT, 2660 LACY ST., LOS ANGELES.

Fisher Body Plant in Oakland.

Oakland, Calif., will be the location of one of the six assembly plants of Fisher Body Co., Detroit, said to be now the world's largest automobile body manufacturer. Fred G. Fisher, president, announces that they will be devoted to manufacture of closed bodies for Chevrolet Motor Co., which has its Coast assembly plant in Oakland.

The other five plants will be at Buffalo, N. Y.; Flint, Mich.; St. Louis, Mo.; Janesville, Wis.; and Cincinnati, O., and with the Oakland plant will give 1,500,000 square feet of additional space and employ 15,000 persons.

PREDATORY LAWS THREATEN TRADE

C. A. T. A. Convention in Santa Barbara to Be Told Deep Need of Unity in Fighting Against Unfairness.

"Predatory" legislation, intended to "regulate" the automobile industry in California, will be fought vigorously as it appears in the legislature's sessions at Sacramento this fall, by representatives of the industry. Preparations for the fight will be made at the annual convention of the California Automobile Trade Association at Santa Barbara, October 16-17, where the members will be impressed as forcefully as possible with the urgent need for their united and unstinted support against the passing of three legislative bills designed to hinder the industry.

One of these bills would freakishly exempt one car and one truck in every family from legal claim of any kind. According to this, a garageman could not attach or hold a car as security for services rendered, nor have a lien of any kind.

In the past a considerable portion of the trade has been seemingly indifferent to state lawmaking activities. This was because much of the threatened new legislation was so obviously unjust and freakish that its failure was taken for granted; but such bills did have surprisingly strong support from powerful cliques, and it took strong automotive representation to have them defeated.

A gasoline tax of 2 cents a gallon, stricter policing of state highways, setting and enforcement of a 22,000 pound loaded truck weight limit, a graduated tax on all motor vehicles, yet with the present license fee left intact, will be asked for in the legislature by the highway legislative committee of the County Surveyors Association of California. This body is working with the State Supervisors' Association and the California State Highway Association, on plans providing more effective protection of paved highways, and for what these bodies consider more equitable distribution of highway building and repair costs.

Takes Intermountain Nash Agency.

L. O. Naylor, an automobile distributor of long standing in Salt Lake City, has taken distribution of Nash cars for Utah, all Idaho except the part that is tributary to Spokane, Wash., Western Wyoming, Eastern Nevada and Southeastern Oregon. Sales quarters in Salt Lake City will be selected soon. Mr. Naylor formerly was an official of T. W. & L. O. Naylor Co., Studebaker agency in Salt Lake City, from which he withdrew last August.

For Cash to Build 8-Wheelers.

National Axle Corp., San Jose, Calif., is expanding its capitalization to handle increased business by an offering of $450,000 8 per cent preferred and common stock. The company manufactures Pacific 8 wheeled motor vehicles, which are announced as being in great demand for use as street cars, buses, stages and trucks.

Fresno Branch Head Killed.

News from Fresno is that Nicholas C. Whealon, manager there for W. J. Benson Co., San Francisco, Stephens car distributor in Northern California, was accidentally shot and killed while on a hunting trip in the Sierra foothills. One of his best friends fired the shot, mistaking him in the underbrush for a deer.

Citrus Belt Show, Oct. 17-21.

Citrus Belt Automobile Trades Association, J. E. Granger secretary and manager, will have charge of the automobile show to be held as a part of the Los Angeles County Fair at Pomona, October 17-21. Word from Mr. Granger is that 45 local automotive dealers will be represented, displaying 76 cars.

Costello With Kenyon Cord Sales.

Jack Costello, well known tire sales executive in San Francisco, has been made sales manager for Hirsch-Blum Co., 1022 Geary St., San Francisco, distributor of Kenyon cord tires and tubes. He was formerly a member of Costello - Ritchie Co., another tire agency.

When through camping, put out fires.

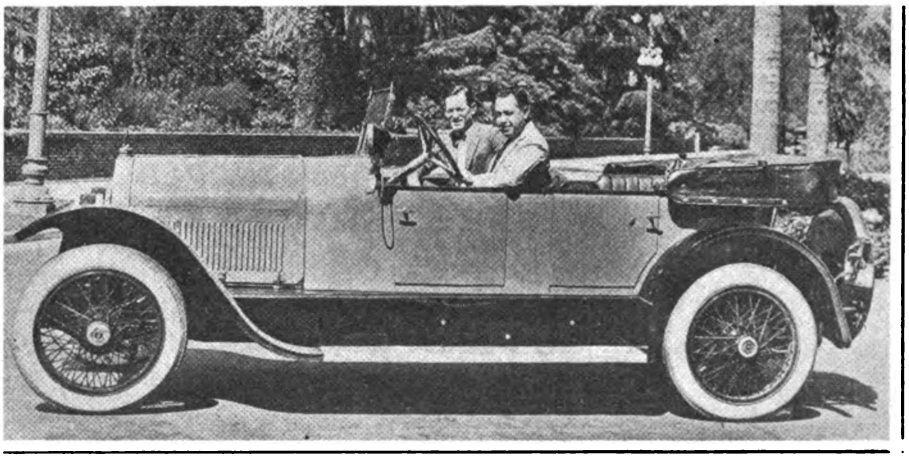
Spokane Trade Items.

New Inland Empire distributing connections for the Chevrolet car have been announced in Spokane. Inland Empire Chevrolet Sales Corp., headed by C. H. Wells, a Chevrolet factory representative for many years, now controls the territory made up of Eastern Washington and Northern Idaho. At a meeting of out-of-town dealers in Spokane, Mr. Wells stated his allotment for the next 12 months will be 1500 cars. The sales building of Culton-Moylan-Reilly Auto Co., former Chevrolet agency, at W916-18 2nd Ave., has been leased by the new concern, which has Charles C. Casey as sales manager and which will employ 40 persons from the start.

On the other hand, Spokane loses the direct factory branch of a large quantity production automobile maker. According to Frank C. Riggs, Pacific Northwest manager for Willys-Overland Pacific Co., with headquarters in Portland, the Spokane branch has been discontinued and the 3 story building formerly housing it will be leased to another automobile concern, probably an independent Overland and Willys-Knight distributor. James F. Boyd, who was Spokane manager, now is Indianapolis branch manager.

Coil Winding Firm Expands.

Dynamo Electric Works, 2315-17 South Grand Ave., Los Angeles, has made a notable expansion in the sales organization for its armature and field coils, and rewinding business. In San Diego, Shaw Brothers, 1141 First St., have been appointed agents, carrying a substantial stock. Traveling in Northern California, E. R. Hickey, of Dynamo-Electric Works, has opened a district branch in Oakland at 408 21st St.



WALTER M. BROWN OF LOS ANGELES GETS BEHIND THE STUTZ WHEEL AGAIN.
At the wheel, in the Stutz demonstrator shown in the picture, is Walter M. Brown, head of Walter M. Brown Co., Los Angeles, who recently resumed distributorship of the Stutz. In the right hand front seat is Bruce Daniels, Pacific Coast district manager for Stutz Motor Car Co. of America, Indianapolis. Mr. Daniels maintains his office in San Francisco, but he is in the field constantly. Mr. Brown was one of the first among the earlier Stutz distributors to rejoin the organization when it was announced Charles M. Schwab had purchased control.

MEANS SPREAD OF GOOD COAST IDEA

Gill Battery, Without Separators, to Be Made and Sold in Pacific Region By Million Dollar Company.

After two years' successful manufacture and sales of Gill storage batteries, during which time operation has been extended into 18 states, it is announced by Gill Storage Battery Co., San Bernardino, Calif., that it has awarded the rights to manufacture and distribute the battery in the Pacific Coast territory to a new corporation, Gill Battery Co. of California.

The new concern, capitalized at $1,000,000, will erect a factory at Oakland, to be in operation early in 1923. The original company will continue to operate from San Bernardino and handle fast increasing business in states outside of the field of the Coast corporation, which has the seven Far Western states, Hawaiian Islands, and Mexico.

The Gill battery, a patented product built without separators, was placed in distribution in 1920. High, narrow, thick, long-lived plates are assembled crosswise in the jars without insulation, such as separators, between active surfaces of plates. The battery has unusual recuperative properties, and, it is claimed, eliminates 95 per cent of common battery troubles.

A development of the future is expected to be the placing of plants in the East and in Canada, where the parent company also has basic patent rights.

Many well known automobile men in California are identified with the new company, and three of the directors of the parent company are actively interested with the California concern. T. H. Lloyd is president; W. Lawrence Gill, the inventor, vice president; Milton R. Standish, secretary; John E. Lloyd, treasurer; and Edward Reber, director.

Trade Heads Flock to Coast.

Recognition of the Pacific Coast as an automotive sales territory is being shown strikingly in the number of Eastern automotive trade visitors appearing in distributing centers since late August. Among them are noted:

G. Albert Lyon, engineer of Metal Stamping Co., Long Island City, N. Y.

Harry E. Field. vice president of Lee Tire & Rubber Co., New York.

C. A. Triphagen, assistant general manager of Reo Motor Car Co., Lansing, Mich.

Henry Roemer, sales manager of Edward V. Hartford, Inc., New York.

R. M. Cowham, assistant general manager of Earl Motors, Inc., Jackson, Mich.

F. A. Aldrich, secretary of Dort Motor Car Co., Flint, Mich.

Edward V. Rickenbacker, vice president of Rickenbacker Motor Co., Detroit, who with his bride has since gone abroad.

J. J. Cole, president of Cole Motor Car Co., Indianapolis.

J. M. Mayes, Radium Luminous Materials Co., New York.

W. E. Young, Western factory representative of Templar Motors Corp., Cleveland.

F. G. Ingram, Oneida Motor Truck Co., Green Bay, Wis.

Perry W. Lewis, National Malleable Castings Co., Chicago.

Jerome Muhleman, Detroit Pressed Steel Co., Detroit.

S. W. Traylor, president of Traylor Engineering & Mfg. Co., Allentown, Pa.

Albert W. Schell, Cincinnati Rubber Mfg. Co., Cincinnati.

F. J. Haynes, president and general manager, Vernon H. Parker, vice president, and John A. Nichols, sales manager, of Dodge Brothers, Detroit.

Argonaut Miners Fear Traffic.

Five of the men who fought 21 days to rescue their comrades who died in the Argonaut gold mine at Jackson, Calif., have been touring the state, telling the story in theaters, to raise money for the bereaved families. One of them, while in Los Angeles, was anxious to get back and underground. The street traffic terrified him.

"Too many people. Too much noise. Too many automobiles to chase you," he said.

OFFICERS OF COMPANY WHICH TAKES OVER SALE OF GILL BATTERIES.

First of a prospective number of regional controls of the sale of Gill batteries, invented by W. Lawrence Gill, San Bernardino, Calif., and in which no separators are used, is Gill Battery Co. of California, Oakland. In the picture at left is Mr. Gill its vice president, and president of the parent company, Gill Storage Battery Co. Center, Milton R. Standish, secretary and general manager, also vice president of the parent company. Right, Edward Reber, director, also treasurer of the parent company.

Seattle Trade Is Active.

Northwest Oakland Co., distributor of Oakland cars, is settled in its new Seattle quarters at 1000 Pike St., where it has 30,000 square feet of working space, compared with 8000 in its old location. The complete line of the 1923 models of the Oakland has been received and an extremely brisk business is being handled. R. K. Roberts, president, and Seattle manager, have had many years' automotive experience in the Pacific Northwest.

Also newly located is Republic Truck Sales Co., factory branch, at 404 East Pine St., where it has the space necessary for large service and parts stocks departments. The revival in truck sales is an unmistakable sign of business recovery in Washington. Recently the branch sold 8 Republic trucks in one order to Fry & Co., large packing concern, which now has 15 Republics.

Harry C. Hays, manager for Willys-Overland Pacific Co., factory branch, says that since April 10 his branch has been unable to accumulate a stock of cars. At the present rate it will sell three times as many this year as in 1921.

Fred S. Haines Co., 12th and East Madison Sts., reports that it has ordered 3000 cars of Chevrolet Motor Co. of California, Oakland, to be sold in the next 12 months.

Especially prominent among new models lately appearing are the Reo phaeton, Stanley 740 types, Winton sport touring, and sedan; and the complete 1923 lines of Oakland and Buick cars.

Going After Tax Dodgers.

The chief counsel and the assessor of Los Angeles County recently got together and looked in the same direction, and what they saw was something awful—evasion of personal property taxes on about $50,000,000 worth of automobiles.

They ask the county board of supervisors to put before the next legislature a bill to correct a flaw in the law which, it is stated, enables 25 per cent of the automobile owners to evade about $2,000,000 of taxation per year, thus keeping the general tax rate up.

California Bond Sale Next Month.

On November 2, at 4¼ per cent, the lowest rate set by the state's highway finance board since the board was created two years ago, $5,000,000 worth of California state highway bonds will be offered for sale. It is a part of the $16,000,000 remaining of the $40,000,000 issue. A $7,000,000 block, yielding 5 per cent, was sold last December.

PORTLAND ORDERS LESS, OUTLOOK O. K.

Closed Car Sales Lead, and Interest in Salem Show Strengthens Belief in a Busy Period Later in Year.

Portland dealers say September will have proved a fair month in Oregon, although not on a par with the spring and summer business. There has been an unmistakable slackening up of orders since the latter half of August, but dealers say indications are that fall business will be unusually good. New models have attracted interest. Closed car sales predominate, and the outlook for more is good. The recent show at the state fair at Salem helped make the prospect pleasing.

Organization of the $100,000 John K. Leander Co., headed by the former Studebaker branch manager in Portland, has been perfected to handle the retail Studebaker business. For a year past this retail business here has been handled by the factory branch, since the retirement of the W. C. Garbe Co. Mr. Leander, who has been with Studebaker since 1913, except during the war, when he was in service, resigned as Portland manager last July to organize his company, but illness delayed getting under way.

During the fall and winter the Leander Co. will occupy the first floor of the Studebaker Building in Portland, using the same retail facilities Studebaker Corporation has used. Arrangements are under way, however, for a new building, into which the Leander Co. expects to move in the spring.

The Pure Oil Co., manufacturer of Tiolene motor oil, has invaded the Oregon field with a factory branch at Portland, to distribute in the western and southwestern parts of the state. The branch manager is Fred W. Vevea, who for several years was with the company in Spokane.

H. S. Kelsey has moved from Los Angeles to Portland to represent Chevrolet Motor Car Co. of California in the Oregon district, taking the place of W. J. Richmond, who recently was promoted to be assistant to the sales manager at Oakland. Mr. Kelsey represented Chevrolet in the Southern California district, and will travel for the company in Oregon and the Columbia River counties of Washington.

Howard Automobile Co., Buick car distributor for Oregon, has leased a new 4 story building, of reinforced concrete construction, to be erected at 13th and Burnside Sts. at a cost of $100,000. It will have frontage of 110 feet on 13th St. and 125 on Burnside. The sales room will be 50x125 feet and free from pillars and other obstructions. All sales and service activities will be brought into one building, whereas sales and office headquarters are now at 12th and Alder Sts., and the service department at 14th and Davis Sts.

Roberts Motor Car Co., motor truck distributor, will erect a 1 story building on a half-block tract on Pacific St. between 1st and 2nd Sts., according to announcement by O. W. Roberts, president, and H. W. Roberts, secretary. The completed plant, to be ready by January, will cost $60,000, and an extra heavy foundation will provide for adding another story when needed.

'Twas a Busy Summer—Figures Prove It

Time was, not so many years ago, when manufacturers of and dealers in automobiles and motor trucks were wont to trim sails and batten down hatches in order to tide over the so-called "summer slump." July and August were months of semi-somnolence; and vacations were all scheduled for that period. No such nautical economies this year, though, as may be gathered from the appended table showing California's registration totals of passenger cars and trucks for the dog-day months for the years 1920, 1921 and 1922.

Not alone does the two months total of 30,857 registrations top the figures for the same months of 1921 by over 50 per cent, but even the peak year of 1920 is badly outclassed—the margin being 44 per cent plus.

Motor truck registrations show an increase of 79 per cent over 1921, and of 44 per cent plus over the peak year of 1920.

The figures, by the way, supply interesting data for those who like to analyze. Note how the northern and southern sections compared, especially as to trucks, in each of three years. Perhaps they mean that Northern California sticks to business more closely in the summer than Southern California does:

	1920			1921			1922		
Month	Pass. Cars	Trucks	Total	Pass. Cars	Trucks	Total	Pass. Cars	Trucks	Total
NORTHERN CALIFORNIA REGISTRATIONS									
July	4,774	812	5,586	4,407	495	4,902	6,215	944	7,159
August	5,442	799	6,241	4,111	679	4,790	6,450	957	7,407
Totals	10,216	1,611	11,827	8,518	1,174	9,692	12,665	1,901	14,566
SOUTHERN CALIFORNIA REGISTRATIONS									
July	3,990	493	4,483	4,200	405	4,695	6,909	825	7,734
August	4,587	486	5,073	5,384	500	5,884	7,549	1,008	8,557
Totals	8,577	979	9,556	9,674	905	10,579	14,458	1,833	16,291
State Totals	18,793	2,590	21,383	18,192	2,079	20,271	27,123	3,734	30,857

Oakland Gets New Truck Agency.

Distribution of Traffic trucks in California has been extended by appointment of Chapin & Henderson, 1440 Webster St., Oakland, to handle these trucks for Alameda and Contra Costa Counties.

Harold D. Knudsen Co., a recent newcomer among Oakland's active list of Chevrolet agencies, has appointed George W. Smith as sales manager.

R. L. Lowrey, with Pioneer Motor Co., San Francisco, Peerless distributor, more than 2½ years, has been promoted to be Oakland branch manager.

October 12-13 will be Durant Day in Oakland, by announcement of the city's chamber of commerce. Distributors and dealers from four Pacific region states will attend the official opening of the $3,000,000 Durant plant. There will be a parade with nearly 1000 Durant cars in line, a luncheon in the factory attended by many prominent Bay district men, and public inspection of the plant. Next day, October 13, a dealers' sales convention will be held.

Visitors Form Fifth of Total.

A recent traffic check at 197 points in Oregon showed that 30 per cent of all passenger cars were from other states and that these composed 20 per cent of the total of motor vehicles of all kinds, including motorcycles.

About 11,500 of the vehicles counted were those of tourists from other states; and on the basis of 10 gallons of gasoline per day for each of these, it is estimated that the visitors were contributing nearly $2500 per day to Oregon's welfare by means of the gasoline tax of 2 cents a gallon.

Doble Steamer Stock Sale Halted.

Sale of Doble Steam Motors Co. stock, which was advertsied strongly by brokers in various California centers, was halted a few days ago by the state corporation commissioner, pending investigation of assets and liabilities. F. G. Cox, the Los Angeles broker who used newsppaer advertising space liberally, is said to have admitted he did not investigate the company's finances before advertising. Motor West has not learned of any facts against the integrity of the company or its personnel.

Almost last call for vacation.

BRANCH HEAD SAYS THERE'S A REASON

Rapidly Increased Mohawk Tire Sales Credited to Live Firms, Especially One Serving Terminal Market.

Sales of Mohawk tires have increased very rapidly in the past six months in Southern California.

George R. Cowden, manager of the Los Angeles branch of Mohawk Rubber Co. of New York, gives much of the credit for this fact to the following dealers and distributors having been added to the Mohawk selling organization:

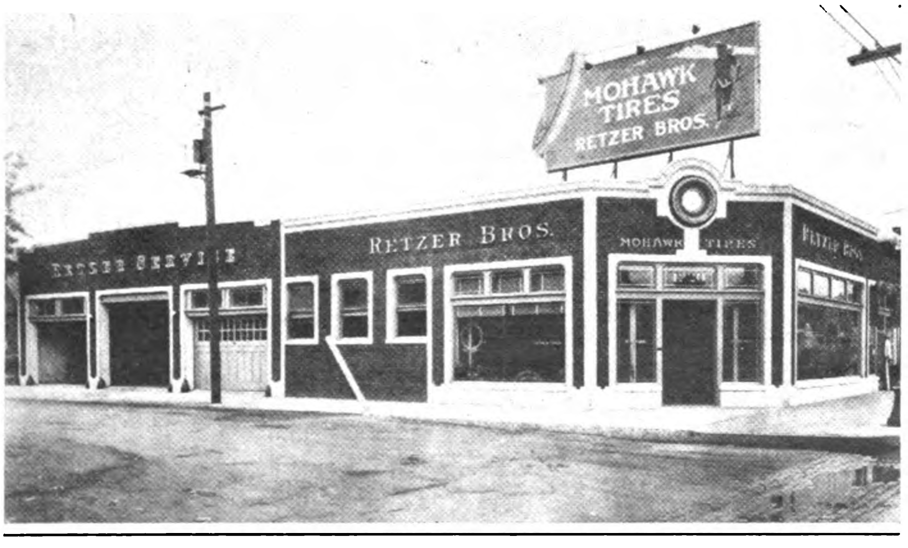
Maryland Motor Supply Co., Pasadena, Calif.; Chas. F. Lee, Pomona, Calif.; Bateman & Barnum, Whittier, Calif.; C. & L. Tire Shop, Ventura, Calif.; Triangle Tire Shop, San Bernardino, Calif.; Puente Tire Shop, Puente, Calif.; Oxnard Vulcanizing Works, Oxnard, Calif.; Hollywood Tire Shop, Hollywood, Calif.; Martin & Devening, Fullerton, Calif.; Kattel Tire Co., Riverside, Calif.; Ward & Stuckey, Phoenix, Ariz.; Cowden's Rubber Works, Lowell, Ariz.; Thost & Prairie, Oxnard, Calif.; Sawtelle Tire Hospital, Sawtelle, Calif.; E. F. Sanguinette, Yuma, Ariz.; Western Vulcanizing Shop, Lowell, Ariz.; R. C. Andrus, Globe, Ariz.; W. B. Waugh, Santa Barbara, Calif.

Mr. Cowden is pleased particularly by the results obtained by Retzer Brothers, Los Angeles city distributors of Mohawk tires, whose new building on East 7th St., completed about June 1, has enabled the firm to increase its business tremendously owing to the location—half a block from the vast Terminal Building. At that building, every day except Sunday, great swarms of motor vehicles congregate from the four points of the compass, to unload products of the soil. These products are carried away by other swarms of motor vehicles, from the commission houses in the world-famous building to retailers, or by retailers, for final distribution to consumers.

Retzer Brothers specialize on tires and tire service, and their success certifies to the quality of the product, and of the service. Mr. Cowden regards their place as the largest and best equipped of its kind on the Coast, and the great market house as the largest in the world.

No dinky service would fit this wholesale market opportunity, therefore the Retzer service department has three double doors of such size that two trucks can be driven into the place at the same time.

There is a large office space and show room, and a complete vulcanizing shop; and the service idea includes locker rooms and shower baths for employes.



RETZER BROTHERS, LOS ANGELES CITY DISTRIBUTORS OF MOHAWK TIRES, HAVE TWO ESTABLISHMENTS, ONE AT 647 SOUTH HOPE ST., THE OTHER AT 1220 EAST SEVENTH. THE LATTER IS PICTURED ABOVE.

Maxwells Perform in Two Cities.

Coincident with remarkable "stunts" staged by Maxwell distributors in other Coast cities, Campe-Rose Motor Co., San Francisco, put a stock Maxwell through a peculiar ordeal on the West Side beach, in front of the Esplanade, before a tremendous Sunday crowd.

With engine left running and abandoned by the driver, the car pulled itself through the heavy, almost tractionless sand to the ocean's edge. The going was so hard and uncertain sometimes that the car could struggle along but 3 feet in 7 minutes. Afterward Campe-Rose announced that a $5000 deposit would be forfeited to anyone proving the car was not a standard factory product in every particular, unequipped with any kind of special contrivance.

On the same Sunday, September 17, two Maxwell cars were cruelly abused at 39th and Figueroa Sts., Los Angeles, by employes of Union Motors, Inc., under direction of C. A. Doyle, sales manager. The cars were driven at 18 to 20 miles an hour down lanes through the crowd of some 3000 spectators. Without use of the clutch, their gears were suddenly and violently jammed into reverse. Tires scuffled agonizingly, but the cars immediately moved backward. This was done again and again. Later the transmission was dismantled to prove its standard factory origin, and the gears were found unscarred from the drastic usage.

Bus Line for the Embarcadero.

Whether it pays for itself, or is subsidized by city or harbor commission funds, a line of motor buses to operate along that part of the waterfront of San Francisco known as the Embarcadero is receiving serious consideration by the city's board of supervisors. From five to ten buses would be operated over a 3 mile route, between 4th and Townsend Sts. and Van Ness Ave. Offers to lease the buses have been received, and the harbor commission would house them, give them right of way, and pay San Francisco $18,000 a year for their operation in connection with the municipal-owned electric lines.

Eldridge-Buick Picnic, Seattle.

Members of the Seattle branch of Eldridge-Buick Co., Washington distributor of Buick cars, and their families, 196 persons in all, held their sixth annual picnic recently. Forty cars carried them to Benbow's Resort at The Lakes, in Pierce County, 55 miles. There were the usual sports, and a noontide banquet at which more than 200 spring chickens were absorbed.

C. S. A. A. Free Tow Service Ends.

Free tow service by California State Automobile Association helped 800 cars, carrying about 4000 persons, over the steep grades on the Big Oak Flat and Wawona Roads into Yosemite Valley by September 13, when the service ended. It began in May and will be continued yearly. It served members of any automobile club in the country. It served also to bring into the C. S. A. A., as new members, many tourists who visit the state annually.

If you miss summer vacation, try a winter one. Fine, in most of the Pacific region.

BAY CITY TRADE IS SATISFACTORY

Shipments from Factories Reasonably Prompt—Only Two Notable Changes in Latter Half of Month.

New sales connections for the Dort car, and the adding of a retail branch for Traffic trucks, practically were the only two notable changes in the ranks of automobile distributors in San Francisco during the latter half of September.

General conditions in the trade are satisfactory. Factory shipments are arriving with reasonable promptness. Some dealers are behind their orders, but with most of them affairs are at that happy stage where goods can be delivered without the delays that injure buyers' good will.

The Dort car agency for Northern California has been obtained by Christensen-Davis Motor Car Co., 1125 Van Ness Ave., headed by Harold M. Christensen and George A. Davis. The appointment was made by H. P. Federspiel, district manager for Dort Motor Car Co., Flint.

The new retail sales department of Traffic Truck Sales Co. has been opened on Post St., in charge of W. L. Wheeler. R. Jackson Jones will concentrate on wholesale distribution as Western representative of Traffic Motor Truck Co., St. Louis.

Bert Latham, Inc., Stutz car distributor, has moved from 1838 Washington St. to larger, more centrally situated sales quarters, 928 Van Ness Ave., formerly housing the Duesenberg agency.

Clydesdale Motor Truck Co. of California, distributor of Clydesdale trucks on the Pacific Coast, has moved to 31-45 Oak St.

General Motors Truck Co., factory branch, in a 12 month period ending September 1, sold 121 GMC trucks in its territory. According to J. E. Huggins, branch sales manager, this is 14.5 per cent of the total registration of 835 trucks of 50 different makes in the same sales field in the same period.

Chester N. Weaver Co. announces that Studebaker registrations in California in the first 8 months of 1922 have been 7376, leading all 4, 6 or 8 cylinder models selling at or above $700 in the state. Its nearest rival showed 6704 as total in the same time.

William L. Hughson Co. has made G. H. Gallindau head of its Lincoln service department at the San Francisco branch. He has been connected with the mechanical end of the industry 15 years, and with the Lincoln factory's experimental department the last two years.

J. C. ("Doc") Galeoto with many years' automotive sales experience in San Francisco, has joined J. W. Frawley, Inc., Gardner car distributor, as wholesale manager.

Word from Detroit during the third week of September was that a prominent figure at the factory convention of Cadillac distributors and dealers was Philip T. Prather, general manager for Don Lee, California distributor. He was a leading speaker at sales conferences on the very successful sales methods his concern uses in California. Later a golf tournament was arranged by factory officials and distributors, and the result was that the Californian carried off all prizes, with a score of 83, bringing home the Cadillac factory golf championship, Old Guards cup, and president's trophy. The Lee organization throughout the state has sold more than 2000 of the new model 61 cars since they first appeared less than a year ago, and since the first of this year its used car business has run at more than $1,000,000 per annum.

THE DEALER'S DAY.

Glancing back over the past two years in the tire industry, what do we see? Gypmania rampant—an industry gone mad. But it must abate ultimately, and when it does, those who survive may look for better things. True, the manufacturers whose delirium precipitated the debacle may look back ruefully at the ground lost before the economic straightjacket was applied, but they can thank their lucky stars that they are not wearing a tag marked "Unidentified," on a white slab in the industrial morgue. To the dealer, the innocent victim of the storm, a new day has dawned. He has organized, and henceforth will be a power. The wise manufacturer will predicate his policy on the righteous principle that his success must be measured by the success of his dealers.—The Wigwam.

New models are the Peerless suburban sedan; Oakland 1923 types; Cleveland 5 passenger sedan; Haynes 55 5 passenger touring car; Stutz Speedway roadster; Marmon 7 passenger phaeton; Willys-Knight open and closed types; Franklin series 10 types; Stanley steam 740 5 passenger touring car; and Liberty Commander coupe.

MOTOR WEST reaches more Pacific Coast dealers, garagemen and repairmen than any other automotive trade paper published in this country.

The Burlingame "Death Gate."

He's driving south from San Francisco at night; after having had a drop too much, and not very wide awake; unfamiliar with the details of the road. Sticking rather close to the right hand edge, he almost hits a four-sided stone pillar, set in the roadway on that side. On the left side is another.

He manages to pass between them, drives on through Burlingame and out of its south end. Suddenly he senses a turn to the left, swings into it wide, at the right, and—too late—sees another pillar, also set in the roadway on the right side, right on the turn, opposite another pillar set on the left side.

He smashes into the one on the right—that is the end of him and his car.

Those are the Burlingame gates—one north, one south of the town. The pillar of the southern one, the pillar set on the outer side of the curve, in the roadway, has been making that "gate" the real "death gate." That is the pillar that was found to be on county land, and that, at last, has been ordered removed.

To Ease Cemetery District Jam.

Congestion of motor travel through the cemetery district south of San Francisco on the Peninsula, is acute on Sundays and holidays. San Bruno Ave. is to be widened, at least at Daly City, to partly relieve the situation south of San Bruno. It is proposed to continue this avenue through Paradise Valley, to make more direct connections with South San Francisco and the contemplated East Side Highway. Formerly used in the stage coach days, it is picturesque and avoids the dangers caused on the present state highway by excessive travel, many curves and electric trains.

Valuable C. S. A. A. Maps.

Paved roads are shown in red, dirt roads in blue, and distances between places are indicated, on detailed maps of San Mateo, Sonoma and Marin Counties, and the cities of San Francisco and Sacramento, on maps now available to the 30,000 members of California State Automobile Association.

For 10 Mile Limit at Crossings.

Limit speed to 10 miles an hour at 31 principal street and boulevard intersections, to reduce traffic accidents, is the recommendation in a report of the Los Angeles Traffic Commission special committee, of which A. M. Young, manager of the Los Angeles speedway, is a member.

This year Southern California's July (September), actually arrived.

AN ANGELUS TIRE COVER STORYETTE

Good Wits, Opportunity, the Service Idea and Push, Widen Radius of a Business Tremendously.

Two men—L. W. G. Parker and Harry M. Waterman—comprised the firm of Parker & Waterman. They were in the feather and mattress business in Los Angeles, and it is said to have been pretty soft for them; but they were of one mind as to being able to conquer a larger opportunity, were one to appear.

One day a man of long experience in making tire covers—R. B. Bailey—came to them. He had sold out his business, he saw the ability of these two, and the three combined forces.

Cautiously, at first. One electric sewing machine was installed, a few tire covers were made and sold, sales grew, and the product was named the Angelus tire cover.

About this time Carl Palmen happened along, and he sold the firm the idea of making him sales manager. His belief in their idea—a superlatively good product—and in an abundant future for it, helped.

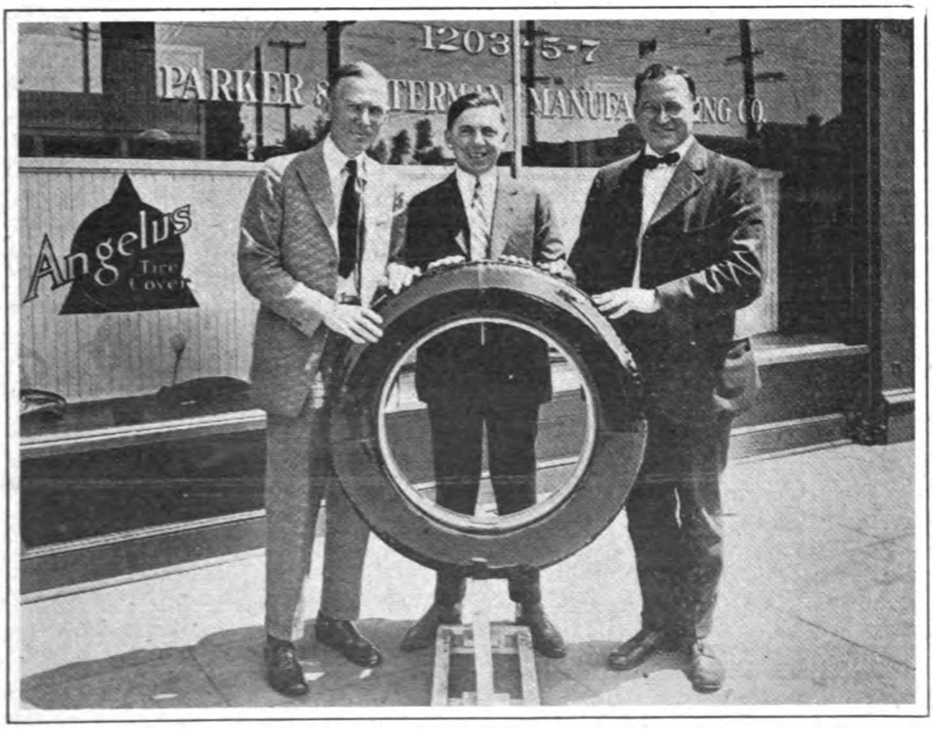
On March 1, 1920, Parker & Waterman Mfg. Co. was incorporated, the four men named owning the stock. Then, in 1921, death took Mr. Bailey out of the enterprise, and his interest was acquired by R. B. Jellison, who for years had made and sold tire covers throughout the East.

As a member of the company puts it, any number of concerns were making "overalls" for tires, but this company's covers were "tailor made suits." The policy was to make the best, regardless of manufacturing cost. Fit was the first consideration. Designs were worked out as an engineer would have done it, to have perfect alignment of all parts. This settled, they scoured the market for a fabric guaranteed to stand up. They found Meritas Leather Cloth, and used it exclusively for their standard product. Drain holes were introduced by them, also; snaps superseded the unsightly, hard-to-fasten straps and buckles. Endless was the thought and care applied.

Gradually the public recognized the merit of these tire covers. Demand grew; it became eager; and now, instead of one electric sewing machine, there is a battery of 19 machines, and the company is "pushing out the side walls" trying to make space for more. In fact ground is to be broken soon for a large, specially arranged factory. The market for Angelus tire covers has expanded from a small radius of about 60 miles to the whole United States, and even into export trade. Orders keep coming from unexpected sources.

It has been another simile of the case of the man in the wilderness, who made mouse traps so good that the world beat a path to his door; but these men have blazed the trail, with modern methods, including a well balanced advertising campaign; and their experience, in the past year especially, has justified their belief that this method, with the best product possible, is justified.

The company, with Mr. Waterman as president, Mr. Palmen vice president and Mr. Parker secretary-treasurer, is attaining national importance for its complete line, including tire covers, cushions, tool kits, job ticket holders and storm shields for Fords, all bearing the Angelus trademark. Thus another Pacific region establishment takes a leading place in the firmament of industry, and becomes another monument to the fact that a quality product, pushed properly, is in effect a good deed well done.



PRINCIPALS OF PARKER & WATERMAN MFG. CO., LOS ANGELES.

In this issue is a story of the origin and growth of Parker & Waterman Mfg. Co., Los Angeles, manufacturing Angelus tire covers. In the picture, left to right, are Harry M. Waterman, Carl Palmen and L. W. G. Parker, who constitute the three points of the triangle in the company's trade mark.

New Pilots for L. A. Race.

The early bird gets 'em, the bird that is late gets left. Because some speed merchants are changing from 183 to 122 inch engines and will not compete in Los Angeles on Thanksgiving Day, and perhaps because of the impulse impelled by his initials, A. M. Young, manager of the Los Angeles speedway, got busy early, went East to the Kansas City race, attended the Fresno race of September 30 and is due back in Los Angeles October 2.

His purpose was to convince some pilots who are not changing their engines for smaller ones yet that they want to see Los Angeles and try its track and that they thereby probably will much more than cover expenses. The outlook is that some new competitors will add to the flavor of the Turkey Day race.

Three New Trucks for Sign Work.

California State Automobile Association is adding three new trucks to its signposting fleet. They will be stationed at Fresno, Oakland and Sacramento, to repair and replace signs, thousands of which are destroyed by "hunters," and maintenance of which costs the association more than $15,000 a year.

The new crews also will erect detour signs, and help scout car crews gather road information.

The Orange County Show.

Passenger cars, trucks, accessories and tractors were "among those present"—very much so—at Santa Ana, Calif., during the Orange County fair, September 27-30. At this writing details have not arrived.

Keep the rim lugs tight. If they work loose they will wear out soon.

L. A. SHOW TO BE NOVEMBER 11-19

Exposition to Be Held in Tents, as Was the One of 1919, Which Was a Veritable Sheik's Dream.

The Los Angeles show will be held November 11-19. It will be the tenth one in the 15 years elapsing since the initial event in 1907.

There has been some seeking about for a more permanent protection than tents against possible early rains, but in vain, and the show will duplicate the postwar show of January, 1919, by being held in tents at Praeger Park, a large vacant tract at Washington St. and Grand Ave., on the southern edge of the automobile sales district. The previous show was a beautiful one—decoratively a "Sheik's dream."

Already much quiet preparation is under way. Distributors are applying to their factories for shipment of the best and most recent of their production, and during November there probably will be a larger number of new factory offerings appearing in Los Angeles than in any other city in the country.

Despite recent strike conditions, new models have been arriving in Southern California with pleasant regularity, and several dealers have been able to announce the display of complete 1923 lines. Especially prominent among the newcomers have been the Stutz Speedway roadster; Moon 6-40 and 6-58 types; Peerless 4 passenger opera brougham; and the Willys-Knight and Roamer lines for 1923.

A new agency is for retail sales of the Moon car, taken by Golden State Motors Corp., 1225 South Grand Ave., already well known as Leach-Biltwell car distributor, which agency it retains. Moon Motors Co., Los Angeles, retains wholesale distribution for California.

W. P. Herbert Co., Chandler and Cleveland distributor, has recently received two trainloads of Cleveland Chesterfield models in a 30 day period, giving it sufficient stocks to make immediate deliveries for a short while. Owing to active demand, the first shipment was practically sold out before it reached Los Angeles.

Western Motors Co., Wills Sainte Claire car distributor, found September proving to be the busiest and most profitable month in its history. Orders placed with the factory for delivery during the last three months are double those of the same period of 1921.

Paige Co. of Southern California sold and delivered 21 Paige and 181 Jewett cars in a recent period.

Leon T. Shettler Co., Rickenbacker distributor, sold and delivered 204 cars in the first 160 days in which it has held the agency, dating from March of this year.

Albertson Motor Car Co., Dodge Brothers distributor, recently closed a contract to supply the city's police department with 54 of these cars for ambulance service, "shotgun squad" work, and traffic policing and investigation.

Ralph Hamlin, Inc., Franklin distributors, will add to the sales quarters at 1036 South Flower St. by erection of a 2 story brick garage, to cost $15,000, as an addition to handle increasing business.

At a meeting presided over by Byron L. Graves, Los Angeles branch manager for Ford Motor Co., at Hotel Ambassador, 98 Ford dealers of Los Angeles and adjacent territory were given an outline of sales and service plans for 1923. It was brought out also that, while Ford production has increased 25 per cent in the last 12 months, the increase in dealer demand in California has been almost double.

GLARING FACT.

It is a glaring fact that most headlights glare! Newspapers tell of accidents due to skidding, defective steering gears, poor brakes, and so on. Of what use is an anti-skidding device, perfect steering gear or perfect brakes, against that white, monopolizing glare? Of what use is ANY automobile unit to a BLIND man? It is a fact that a driver facing really glaring headlights is momentarily blind. His brakes may or may not help, his steering wheel is perhaps an instrument of death, and last but not least, his mind is thrown into a confused and helpless state. Arrests for headlight violations are entirely legitimate. — R. W. Martland, Secretary California Automobile Trade Association.

Going to Hewitt Rubber Co. Meeting.

On October 7 Charles W. Harris, manager of the Pacific Coast division of Hewitt Rubber Co., Buffalo, will leave San Francisco to attend a general sales policy conference.

Hewitt distributors on the Coast will go with Mr. Harris. They are Henry E. Schmidt, of Seattle; J. B. Wood, of J. B. Wood Tire & Rubber Co., Los Angeles; and A. D. Nichols, of Weinstock-Nichols Co., San Francisco.

Mr. Harris states sales in August broke record, that the factory has been running day and night for several months, and that larger facilities are being considered.

Not only strike while the iron is hot, but make it hot by striking it, said a chap named Oliver Cromwell.

Dealers Show at San Diego Fair.

The San Diego County Fair, held in the Industrial Building in Balboa Park, San Diego, opened its portals September 20. The fine automobile show in the south wing of the building was under management of the Motor Car Dealers' Association of San Diego, Louis C. Maire, president and show manager. There were 23 exhibitors, showing 40 cars of 30 different makes, and each dealer was limited to space sufficient for two cars.

The evening before the show's opening the dealers attended an "inspirational" dinner at U. S. Grant Hotel, where C. A. Triphagen, assistant general manager of Reo Motor Car Co., Lansing, Mich.; Police Lieut. Arthur R. Hill of San Diego; and George Gilroy, state motor vehicle inspector, were the leading speakers.

Powell Motor Co., 1st and C Sts., in the first two weeks of September, sold 128 cars, said to break all two-weeks Ford sales west of the Rockies. J. A. Nadeau, Ford agent in Los Angeles, holds the one-month record, 206 sales, but E. L. Williams, Powell manager, announced sales at the end of the third week as totaling 201 cars.

Leo Schachtmayer has been made sales manager for John Moynahan, 208 C St., Packard dealer.

Maryland Garage announces 16 carloads of the new Chalmers cars have been sold by it since the 1923 line first appeared in San Diego.

Hope to Rival Lake Tahoe.

Fifty miles east of San Diego, 28,000 acres of the old Cuyamaca ranch, adjacent to Cuyamaca Lake, in Cuyamaca Mountains, were bought late in September by a syndicate. The idea is to have a summer and winter resort rivaling Northern California's gem, Lake Tahoe. A 100 room hotel is to be built immediately and homesites sold. Wealthy residents of San Francisco and other Western cities, Imperial Valley and other rich agricultural sections, and the East, are said to contemplate winter residences there. The news contains much motoring interest. The development will help reveal San Diego's marvelous hinterland.

As to Border Vaccination Rule.

Among the things that happen to motorists and others who cross this country's boundary into Mexico, one has been a demand to show a vaccination certificate. This requirement, going or coming, has ended at Nogales. No certificates are required at El Paso. At Laredo, Eagle Pass and Brownsville, none are needed in entering Mexico, but must be shown on coming back at those points.

SAYS HEADLIGHT LAW IS INVALID

Durant Man, Arrested for Having Bulbs Alleged to Throw Too Much Light, Fighting California Code.

At El Cerrito, in Contra Costa County, before Justice MacKinnon, on October 24, Capt. Al G. Waddell will be tried for violating the headlight provisions of California's motor vehicle act. Captain Waddell, who directs Durant publicity, has pleaded not guilty. Attorney Breed, representing the Durant Co., is fighting the case for him. Mr. Breed, at the hearing, presented reasons to show the law cannot be enforced. It is stated the idea is to have a court ruling as to whether the headlight provisions of the act are legal or illegal.

Waddell was arrested August 30 because he used bulbs of 32 candlepower in lamps having lenses for which, by the law, bulbs of 21 candlepower are the limit.

The case does not appear to be prearranged. It appears Waddell did not violate the law intentionally, and that the justice court's ruling, whether for or against the law, may lead to further litigation.

Two district attorneys differ as to the law's validity. The one in Alameda County says it is not clear. The one in Contra Costa County says it is. Steve Neale, chief deputy of the state motor vehicle department, says the former should see the ruling made by the supreme court nearly 2 years ago in the case of Lee Hinkleman vs. the People of California, upholding the law.

The Unending Stream.

Recently, and unusually, Los Angeles nights have been warm; more recently not so warm; yet warm enough to make the following editorial paragraph in the Los Angeles Times fit:

"The unending stream of automobile lights these nights along the thoroughfares leading to the adjacent beaches recalls nothing quite so much as the glare of millions of old-fashioned lightning bugs we used to see back East in the good old summer time."

From Venice, where mermaids in one-piece suits meander, to Los Angeles, is about 15 miles. Yet some motorists who left Venice fairly early in the evening of a recent warm Sunday did not reach their Los Angeles homes till 3 a. m. Monday. Reason—a jam, stalling many thousands of cars, at an intersection of two boulevards. Conditions on all sides of Los Angeles, where main roads converge or cross each other, are developing so that such occurrences, called "throttlefests," feature every Sunday. The remedy seems to be to take the "long way around."

Efficient Man Comes to Coast.

Comes a copy of the Democrat, of Bay City, Mich., containing a front page article chronicling the resignation of John C. Sheflin as manager of the Bay City Motor Club, and of his intention to drive westward to Pasadena, Calif., where he has acquired a half interest in the tire business established by A. M. Smallwood.

The Bay City club had 900 paid-up, active members when Mr. Sheflin left it. When he started as its manager it had less than 300. So Bay City loses, and Pasadena and the Pacific Coast gain, a "live one."

Display of Old Bikes.

Each cycling decade from 1868 to the present one was represented in a display by H. J. Wurzburger Co., Los Angeles, Earl and Kissel distributor. The grand-dad of all had two small steel tired wheels with a seat between, spool pedal on the front wheel. That was the velocipede, and was the result of "perfecting" the "draisine," named after a Frenchman, and which was propelled by pawing the ground with the feet—as boys on "scooters" do, but with both feet.

Some Traffic.

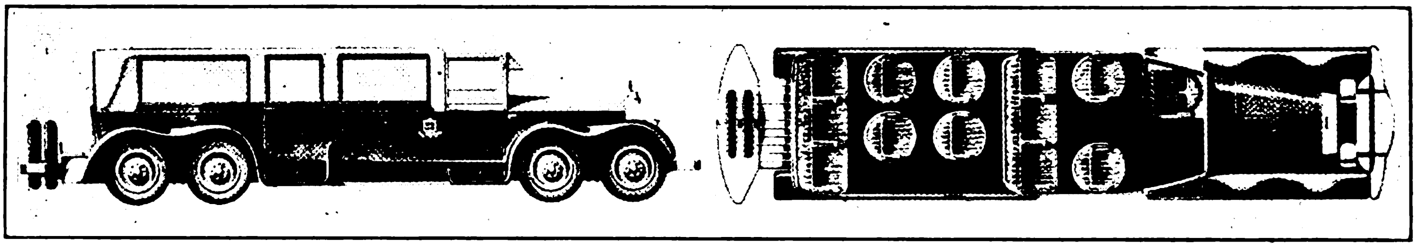
At the Union League Club, Los Angeles, recently, the city council and other bodies went to listen to the traffic commission, composed of members of 70 business, civic and engineering organizations. The commission has a number of committees. It is studying the traffic problem, and has not found the solution. However, some of its findings were related.

It was stated that in 11 hours the intersection at Seventh and Broadway was used by 187,081 pedestrians; 13,468 automobiles carrying 21,226 persons; 2542 street cars carrying 97,486 passengers; a total of 16,010 vehicles, averaging 1455 per hour or 24 per minute; and a total of 305,683 persons, averagnig 27,789 per hour or 463 per minute; of pedestrians alone 17,007 per hour or 283 per minute; of automobiles, 1224 per hour, 20 per minute.

A remarkable study during several years by one man, who uses his car constantly, has resulted in a one-way traffic plan adapted to use simultaneously by all traffic bound north, or south, or east, or west, on signal from one place. While essentially very simple, it requires some radical eliminations—for example, of such out-of-date practices as having street car tracks elsewhere than at curbs. It practically would double traffic area on Broadway, Los Angeles; roughly, it would also double the mileage per day in each traffic lane; and it would reduce confusion and resultant wear and tear on everything and everybody, to an inestimable degree.

The idea—simple; putting it over—quite complicated, because many points, due to present practice, require answering—and can be, completely. Motor West has put the Los Angeles commission's chief engineer, H. Z. Osborne, Jr., in touch with the originator.

The idea may be said to be that of the "magic circle," which being used and highly praised in Los Angeles. The circle is restricted to one intersection, but this idea would revolutionize traffic in the entire business section.



EXAMPLE OF WHAT IS DOING IN MOTOR VEHICLE DESIGN AND CONSTRUCTION ON THE PACIFIC COAST.

National Axle Corp., San Jose, Calif., is beginning manufacturing motor vehicles of the 8 wheeled type—trucks, street cars and buses—under contract with the Eight Wheel Motor Vehicle Co., San Francisco. The bus, pictured here, seats 12 persons. The driver's seat is separated from the rest of the body by a partition. There are six chairs, held firmly to the floor by rubber vacuum cups attached to each leg. The street car is designed for carrying 31 passengers; has full head room, cross seats on each side of a centre aisle, is arranged for "pay as you enter," and one-man control. The truck is designed for fast transportation. It will have a speed of 35 miles per hour. The advantages of the eight-wheel idea have been proved by a bus which was built a year ago and has been driven over California highways and mountain roads more than 13,000 miles. The first 2500 miles developed what few minor changes were needed in design and construction. The completed stage was operated under regular working conditions, in all kinds of weather, with full satisfaction.

LAST HONOR TO ROSCOE SARLES

Hundreds of Friends at Sad Services in Los Angeles—Death Causes New Comments On Dangers of Speed.

On Sunday, September 17, Roscoe Sarles went over the top of the new Kansas City track, during a 300 mile race by means of which the track was dedicated. Sarles' body was taken from under the wreck of his car, sent to Los Angeles, and on September 21, in a quiet mortuary chapel, hundreds of friends listened while a minister spoke of the brave life which had been dedicated to sport, to science, to commerce and to human safety and comfort.

The little widow wept; so did others. The casket was taken from the mass of flowers and put away in a quiet vault. Roscoe's soul had passed on.

That's all; and yet it is not all. Those services, and what caused them, brought out, in print and by word of mouth, the questions: "How many more? How long will this killing game go on? Does it continue to be necessary?" Newspapers the country over commented on Sarles' death somewhat differently than similar deaths had been commented on before. One editorial, in the Los Angeles Times, typified them all. In part it said:

"The list of brave lives sacrificed in the new sport of democracy lengthens ominously as the speed record each year is cut shorter and the chances of beating it are rendered more difficult and dangerous. There must come a time when the chances of death will make the conquest of time and space—which the modern automobile race really typifies—too dangerous, not for the drivers, who will always be ready to go where fame and gold are to be won, but for the public, who cannot too often witness such tragic spectacles and still find the sport attractive."

Six of Sarles' former associates and competitors acted as pallbearers: Tommy Milton, Jimmie Murphy, Ralph De Palma, Harry Hartz, Eddie Pullen, Ernie Ansterberg. Among the floral pieces one especially symbolic was sent by the Los Angeles track association. It represented, in flowers, the checkered flag. Sarles was a member of the Los Angeles Athletic Club, which sent its token. Sarles also was an Elk, and Elks had charge of the services.

Sarles was born in LaFayette, Ind., and promoted and drove in dirt track races while in his teens. Then he entered the employ of Louis Chevrolet as a mechanic. Later he got to ride as aide to the famous Louis.

Then one day, at Minneapolis, Louis said to him: "Young fellow, tomorrow you drive." It is said Sarles was so tickled he could not sleep that night and was at the track and in his driver's uniform ready to go out on the track, at 4 o'clock in the morning. He had never driven the course and was anxious to go out for a practice spin in the early morning, but Chevrolet objected saying, "Wait until the race." He did wait until the race, and then went so fast he beat his former tutor to the finish wire. It was a great day for Roscoe.

Respected by all the drivers, Sarles undoubtedly assimilated the calm, deliberate driving he saw while riding with Louis Chevrolet, and the reckless, speeding abandon he learned while riding beside the tiny Joe Boyer, regarded as one of the most daring men that ever entered a race.

ROSCOE SARLES.
Roscoe Sarles is dead—klled at Kansas City, September 17, while doing his part.

Roscoe was known in racing as "Heavy Foot" and "Battling" Roscoe Sarles, but off the course he was a dapper Beau Brummel, with a personality that won him thousands of friends. Like many race drivers he was ill at ease in a touring car and drove slowly—even at a snail's pace in traffic.

C. S. A. A. Sign Posting.

California State Automobile Association signposting trucks are placing new signs on the Placerville and Auburn routes to Lake Tahoe. Similar work is being done between Oakland and Sacramento.

More About Pike's Peak Winner.

Some details received since the last issue, which told of Noel Bullock, of North Platte, Neb., winning the Pike's Peak race on Labor Day, make the feat the more remarkable.

Last year Glen Schultz, of Colorado Springs, led in his class in a Ford equipped with a Rajo head. This year Bullock, with a home-made, Rajo-headed Ford, made the fastest time made in any class.

Right from the start, 9050 feet elevation, all the engines contended with thin air. Yet Bullock's car went the first 3¼ miles in 3¾ minutes. The top is 14,109 feet, so the rise was 324.7 feet per mile, or more than 6 per cent for the 12½ miles, stated to contain 147 curves, many of them hairpins or of the "W" variety. Bullock's speed was 37.8 miles per hour. On one curve his left wheel skidded off the edge but the right rear held.

Bullock did not get his Rajo racing head in until September 1, and went up the mountain only twice before the race on the 4th. On the 3d, a careless tourist coming down the Peak rammed the rear end of his car, and he worked nearly all night to get it in shape.

Bullock used neither fan nor pump, depending entirely on his radiator cooling system and the free water circulation the Rajo racing head permitted. Radiation is very rapid in rarefied air, yet evidently this engine was at maximum efficiency throughout. It had stock piston pins, connecting rods, crankshaft and bearings. The pistons were 15 ounce ones.

Fresno Race Report in Next Issue.

The 150 mile race at Fresno, September 30, closing day of the Fresno County Fair, will be recorded in the next issue of Motor West. There were 11 entries—Murphy, Milton, Elliott, Hill, Wanderlich, Hartz, Klein, De Palma, Al. Melcher, Sterling Price, Cliff Durant. The bowl was soaked, to make it safer and speedier. Governor Stephens was to be honorary referee, which was nice; and Fred Wagner, veteran starter, was to be on the job; which was very practical. The outlook was for a great race.

Arizona Purses Will Be Small.

Big purses, to attract famous automobile pilots or record-breaking pacing or trotting horses, don't pay, is the decision of those who will manage Arizona's state fair, at Phoenix, opening October 30. Events will be open to the world, but the purses will be—er—moderate. Too much coin went out of the state, not enough came in, when the prizes were fat.

CLEARLY A CASE OF CAUSE, EFFECT

Growing Demand Shows Coast Public is "Sold" on Hayes Demountable-at-Rim Wire and Disc Wheels.

Cause and effect—if the cause is good, and has good people behind it, the effect is bound to be pleasantly profitable to them.

That is what is happening in the case of what is stated to be the first successful demountable-at-rim wire wheel ever produced—the product of Hayes Wheel Co., Lansing, Mich., one of the giants of the automotive industry. It is having a similar experience with its demountable-at-rim steel disc wheel.

R. H. Voss is general manager of the company's Pacific Coast branch. Late last spring the Coast sales rooms and a completely equipped wheel repairing and re-enameling department were opened up at 1447 Van Ness Ave., San Francisco, and putting the demountable-at-rim wire wheel before the public, through the medium of a large number of automobile dealers, began.

Today it is difficult to keep the branch stocked sufficiently with the wire wheels, and there is a considerable number of back orders on the books, not only for that type but for the steel disc wheel as well.

The public has indicated enthusiastically that it is "sold" on the demountable-at-rim idea. This is evidenced by the orders which follow inspection at dealers' places and at the branch in San Francisco; and the popularity of the disc is increasing so rapidly that the company's facilities for making it are at top pressure, day and night.

Hayes demountable-at-rim wire and steel disc wheels are in production for these cars: Ford, Chevrolet 490, Earl, Durant, Nash and Dodge; and new models are being added as fast as possible.

Recently the Coast branch received two carloads of both kinds of wheels, and sent Motor West a picture of a portion of the shipment, all of which was needed to fill orders. Mr. Voss states additional carloads are being rushed from the factory.

Repair and re-enameling service for all types of wire wheels is supplied at the San Francisco branch, where there is a high class, factory-equipped department, manned by expert repair men from the factory.

Dean of 'em All Coming to Coast.

John C. Wetmore, automobile editor of the Evening Mail in New York, and dean of American newspaper automobile editors, has been in the Far West and sent back crisp, admiring articles about it, its people and their ways. He told Motor West he would return to Los Angeles to remain, and it now appears he will come before the year ends, with a knock-em-dead idea in publicity distribution; a plan involving real service to all concerned, including editors who now slip, toss or hurl so much publicity stuff into the waste basket.

On September 26, the Evening Mail published Wetmore's Motoring Memories. That the volume must be rich with recollections, all who know the redoubtable Johnnie will certify.

First Autumnal Days in Camp.

The autumn season of golden days has opened at Giant Forest, in Sequoia National Park, California. Many campers have motored home or to where they will winter before returning to the East, but others have replaced them and camp fires twinkle through the Sequoias. The first rains have laid the dust and the mountain air has a refreshing tang. In August, traffic to the park totaled 1832 automobiles and 6101 persons, compared with 1597 cars and 5588 persons in the same month last year.

Davis Drives Out, Hurries Back.

On September 18 a friend phoned Wisner Gillette Scott, whose hobby is highway projects of magnitude, at his hotel in Los Angeles. They met at the curb, and the man who had phoned introduced three others who were in his car—a doctor friend, his engineer, and his mechanician—he does his own driving.

It was late afternoon. No, they couldn't accept any hospitality—they were going to bed soon after dinner and would leave at 3 a. m. next day, the Southern route, for New York, where the man had promised to meet a ship on which one of his daughters, who had been motoring abroad, would return.

It was Charles E. Davis, C. E.,, of Cambridge and Cape Cod, Mass.; president of National Highways Association; a man of wealth and action, who has spent large sums for fine maps, showing routes that are and some that Mr. Davis believes ought to be. As he had done before, he had driven quietly out to the Pacific Northwest, down the Coast, and was on his way home again. Just wanted to give the country a periodical look-over.

Mr. Davis commended Mr. Scott for having originated the idea of having main highways widened at 25 mile intervals, to provide frequent, safe, economical airplane landings.

In the West Mr. Davis' car was partly disabled twice. In both instances, the nearest dealer not having the needed units, Mr. Davis simply bought a new car of the same make, had the parts transferred to his own, ordered the new one completed and sold, and rambled on. In one case the damage was done by a flivver driver who came down a California mountain road carelessly, and who nevertheless wanted pay for damage to his own car. Too busy to argue, Mr. Davis paid him and told him to go somewhere—indicating a place not mapped, but hot.

2 CARLOADS HAYES
2 CAR LOADS HAYES
2 CAR LOADS HAYES
2 CARLOADS HAYES

PART OF TWO CARLOADS OF DEMOUNTABLE-AT-RIM STEEL DISC AND WIRE WHEELS RECEIVED RECENTLY FROM THE FACTORY BY THE PACIFIC COAST BRANCH OF HAYES WHEEL CO., IN SAN FRANCISCO.

AN EXPERIENCE IN A TRIP DOWN TOWN

Kindly Driver Picks Up Others for a Ride to Work, and Remarks Lead Back to Old-Time Recollections.

There is quite a bit of conversation, sometimes, in a quarter of an hour or so.

A girl and a man, strangers to each other, were waiting for a car to downtown; a mere few minutes' ride. Along came a chap in a Chevrolet sedan, and invited them in.

On the way, the usual bromidic thanks, and so on. The host said he had been in Los Angeles two weeks; came from Seattle; for ten years, including back East days, he often had invited passengers; even at night on the road between Seattle and Tacoma; so far he had not in any way been imposed upon.

The girl got off at Pico, the host parked his "Chev", and in a 5 minute walk the two men swapped a column and a half of facts and theories—not hurriedly, just casually.

The host thought well of a certain new steering wheel lock. The other mentioned the Whyte Motorcontrol.

The host said fabrics were "on their way." The other used to know Freddy Dickinson, inventor of the cord tire-making machine.

The host used to go to school with a girl named Dorothy, in Michigan, years ago, and used to help her dad tinker with an automobile the dad was evolving. The dad suggested that when the lad got through school he would take him into his prospectively prosperous automobile manufacturing business; they would make a lot of money; it would be nice for the lad and Dorothy; and so on.

Years passed. The young man went into newspaper work. He married, went Over There in the recent war, and on his return was given a job in the business office of a Seattle paper. He knew nothing of bookkeeping, but something in him made him advance to his present position of auditor of all the Scripps papers on the Coast.

Not long ago he happened East, called on Dorothy—also married in the meantime—and she joked with him about it.

"Well, I'm worth a million now," she said. She has two children. Her father is one of the richest and best known automobile manufacturers.

"I'm worth a million, too—in health and happiness," said Dorothy's former schoolmate. He has a wonderful wife, and a boy.

Presently the talkers bid each other good day. The kindly newspaper auditor went his way and the grateful guest went his.

Mrs. Westgard Likes San Diego.

A. L. Westgard, who was pathfinder extraordinary for the American Automobile Association, who mapped most of the existing transcontinental routes and who died nearly 2 years ago, had thousands of friends. It will please many to know that Mrs. Westgard, who came to the Coast late in 1921, settling in San Diego, is happy there, having recovered her health, which was not good after her noted husband's death.

Mt. Tamalpais Boulevard Progress.

San Francisco news from the C. S. A. A. is that construction of Mt. Tamalpais Boulevard has reached Rock Springs, and the remaining three miles will be under construction within a few weeks. There is no toll being collected on the completed portion. From this section there is an excellent view of the coast line and interior country to the northeast of Mount Tamalpais. From Rock Springs to the Tavern the view will be to the south, taking in the ocean and the mountains to the east. Tolls will be collected on the road as soon as it is completed to the Tavern. Dedication exercises and a barbecue will mark the completion of this section of the Marin Highway.

RANKIN SAYS—

William H. Rankin, head of an important advertising agency which has offices in New York, Washington, Akron, Chicago and San Francisco, is well known in this industry as a seeker of essential facts. He said recently: "Business is more encouraging than at any time in three years. As a matter of fact, all our customers are now prospering. There isn't a bad one on the list. More business is coming in voluntarily than we have ever before known. Some of our customers have invested greater amounts in advertising of late than ever before and have found this to be a profitable policy—in addition to having enabled them to avoid disrupting their trained working forces."

World's Largest City Park.

A once poor Los Angelan, now living in the Realm Beyond, Colonel Griffith, gave the city 3390 acres, named Griffith Park, north of Hollywood and containing magnificent Mount Hollywood; the world's largest city park. A fine region for a Sunday afternoon drive. Recently the city service department deeded a 34 acre addition.

Coast-to-Coast Ail Mail News.

An air mail service of 28 hours between New York and San Francisco within a year was promised recently by Paul Henderson, Second Assistant Postmaster General, at a luncheon given in the Automobile Club of America quarters in New York, by the Aeronautical Chamber of Commerce.

The plan is for a twice-daily schedule, with one takeoff at New York early in the morning, arrival at Chicago in the evening, a night trip to Cheyenne, and on to San Francisco next morning.

The Chicago-Cheyenne stretch will be the first section to be illuminated at night, said Mr. Henderson, who is chief of the air mail service. Plans also are being made to provide emergency landing fields, perhaps as close together as 25 miles, with illuminations to guide the night mail pilots.

The idea of having airplane landings by widening highways at points about 25 miles apart, was originated by Wisner Gillette Scott of California, whose design and promulgation of the idea won immediate approval of aviators and others competent to understand its importance.

Contracts have been let for illumination of the air mail field at Chicago. If satisfactory arrangements are completed at Detroit, the first night flights will be made between Chicago and Detroit early in October.

Mr. Henderson also announced that air mail to the interior of Alaska soon will be in operation.

Mr. Henderson said 2,000,000 miles had been flown without a fatality, and for the 8 weeks ended September 9, efficiency had been 100 per cent. Last year, when 1,800,000 miles were flown, efficiency was 94 per cent. He credited the record of safety and performance to the skill of the pilots and the ground organization.

Route Maps by the Million.

Automobile Club of Southern California says it will have issued more than 4,000,000 route maps this year, referring to the southern part of the state alone. In 1918 the total was 350,903; in 1919 it was 2,000,000; in 1921 it was 3,814,640. The club's printing presses work all day and often far into the night. Each map is 10½ inches long. The complete set, it is stated, would cost a non-member $103, the prices ranging from 25 cents to about $2. There are several hundred maps in all, in fact one series, covering one transcontinental route, consists of more than 100 of the heavy-paper strips.

Determination, plus judgment, wins.

MOTOR WEST
THE MOTORING AUTHORITY OF THE PACIFIC COAST

Established 1907

AN ILLUSTRATED AUTOMOBILE MAGAZINE OF QUALITY, ISSUED SEMI-MONTHLY.

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OCTOBER 1, 1922

Motor West's specific field—the Pacific region. Its news service idea—any subject affecting motorists.

Merely Stating the Case

DURING the war, the motor vehicle industry (but not the railway industry) was called unessential, undeserving of the use of bank funds which operation of motor vehicles had done so much to swell.

When coal shortage—not a real shortage but a cornering of coal—threatens, the motor vehicle industry (but not the railway industry) again is classed among the relatively unessential.

When money, and more money, must be raised to maintain highways on which motor vehicles must operate to swell the prosperity of the people, the public is "educated" (by railway propaganda, notably) to the idea of raising the money, and more money, by taxing motor vehicles more and more.

"The Gas Is Getting Stronger"

FOUND in Argonaut mine, where 47 men died in a trap, was a memorandum saying, in effect: "The gas is getting stronger."

Over the top of the Kansas City track went Roscoe Sarles, his mechanician and his car. Sarles was killed.

The miners died in doing their part in life. So did Sarles. He had no time to write a memorandum, but everybody who knew him knows that he was as brave as the miners who died.

Ever down in a mine? Ever talk intimately with the men down there? In most of them, more or less, depending on their natures, there is a simple, pure conception of the deep spiritual realities. Isolation does that. No matter how uneducated as to books, they have that advantage over the rest of us. We can get a little of their angle if, some time, we lie on a bald, rocky, windswept mountain top, say 11,000 feet above the sea, at night, and look off at the other worlds. It makes us realize how little we are individually, yet how much, in our daily lives, we can do to improve the general human situation by doing our best and, if it so be that "luck" seems to be against us, remarking quietly that "the gas is getting stronger"—and continuing to do the best we can.

The same thing is possible, and is done, in the opposite of isolation—in the swirl of intense action. Roscoe Sarles must have felt it often, and at the end.

Why Not Have That $170?

GORDON LEE, chief of the automotive division of the Bureau of Foreign and Domestic Commerce, in the Department of Commerce, has been on the Pacific Coast and seen some things, including the future, more plainly than some others have.

Mr. Gordon urges Eastern makers to establish assembly plants on the Coast, for both domestic and export reasons. Jobbers told him that by partially assembling trucks in the East and packing them in box cars, they could be laid down on the Coast for $30 instead of $200.

Why hand the difference, $170, to the railroads? If the ultimate buyer could buy one vehicle for that much less, he could spend that much more, for automotive and other things which would increase his buying power still more; enough more, it would seem, to make the plan, and Coast assembly plants, more profitable than the present practice.

Present practice, naturally, is increasing the impulse to **manufacture** on the Coast, which is highly desirable, and which is inevitable eventually, anyhow. The sooner Eastern makers start assembly plants on the Coast, the more firmly they will be set in the field when the eventuality arrives in full force.

The "Why" of Real Estate Men's Move

THE California state body of real estate men asked suddenly and unexpectedly, recently, that all motor transport be put under railroad commission control, and that the commission be empowered to grant practically perpetual franchises. Truck manufacturers, chambers of commerce, city councils, and many operators of small fleets or single trucks, are asking why, and protesting hard.

The big idea is to eliminate irresponsibles, the attorney of large motor transport interests told Motor West.

The really big idea is to save motor transport from going plumb to pot, like the poor electric railways are doing, the real estate body's research director informed Motor West—indicating disinterested altruism; no self interest whatever.

Following the lawyer's frank reason, and the real estate research man's ingenuous one, another one, given Motor West the other day, consisted of a statement that the real estate body asked the electric railway folks, for the love of Mike or in terms as urgent, to build more lines so as to make realty subdividing the profitable business it deserved to be; and that the electric railway folks shrugged their shoulders, as much as to say, "How can we?", and then made a co-operative suggestion which the real estate men translated into the railroad-commission-control-and-perpetual-franchise proposal printed in Motor West recently.

Normal development of real estate subdividing should not be hindered. If motor transport, as it is growing, does hinder it, the real estate men know it. If they do know it, and if it is the real reason for the movement they are trying to get going, perhaps stating it bluntly at the outset, and **backing it up with facts,** would have served them and the public well. As it is, their action has puzzled and irritated; and their movement doesn't seem to move.

Christmas Slump Is Ridiculous

HERETOFORE, Christmastide has meant low tide in automotive sales lines. That is ridiculous. It can be made a high tide.

Not by "letting George do it," however; at least not by refusing to pay George if he is a capable sales and advertising counselor, willing to extend his ability to create sales.

One sometimes feels like lifting the hat in admiration of fakers, who succeed, by advertising and other skillful sales methods, in selling **nothing**; not only once but repeatedly, though of course not permanently.

Motor West told, not long ago, of a service station which needed more business, which was obtained in embarrassing abundance by advertising itemized lists of groups of things comprising one kind of service or another.

It was the same service others were doing for no more money, but itemizing it boldly in advertising made it sell like hot cakes.

The plan is so simple that it hardly can be called ingenious, except in comparison with a total lack of selling ability.

The 10,000,000 motor car owners, as a class, have more money than any other 10,000,000 gift buyers.

They welcome gift suggestions at gift-giving time.

Especially is this true of women. Even children are good prospects.

Automotive gifts, from those costing a few cents to those costing thousands of dollars, are useful. People like to make useful gifts.

Most of the 10,000,000 persons open to automotive gift suggestions will have occasion to visit a dealer during November and December.

Then is the time to seize the opportunity to turn a slump period into a peak sale period—and NOW is the time to think up the details of the campaign.

Lem Loosehead says: Purchasing agent I know told a specialist who said he could cure him, 't he'd have to shade his price—the undertaker was making a lower bid on the job.

"Gasolinizing" street car systems, they call it in Kansas. By any name, the idea will have a large adoption, judging by many signs.

The success of the bee is not due to the buzz, but to the "buzz" without the "u."

Often a stiff-necked fellow is also a rubber-neck.

Probably Best August On Record

National Automobile Chamber of Commerce figures, printed in the September 15 issue, indicated an almost certain increase of about 20,000 cars and trucks in August, compared with July, and 50 per cent more than in August, 1921. Other figures made public September 14, and received too late for the issue, indicated the best August business on record, the total being estimated at 272,640, exceeding July by 12 per cent and August of last year by 53 per cent. In 1921, August exceeded July by only 1 per cent.

The estimate put August production a close second to June, the record month, when the total was 289,120. The figure for August, 1920, was about 190,000.

The figures indicated 1,662,740 for the first 8 months of 1922, compared with 1,668,550 for all of 1921. Production by months, in 1921 and 1922, is shown as follows:

	1921	1922
January	51,919	90,481
February	65,218	120,293
March	109,758	171,390
April	156,892	219,294
May	163,667	255,167
June	177,757	289,120
First Half	725,211	1,145,745
July	176,067	244,355
August	178,831	*272,640

*August, 1922, estimated production report.

Detroit Short of Stamping Steel

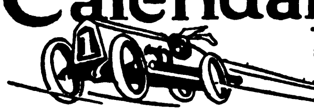
Detroit news, September 27, is that many plants have had to send out scouts to speed deliveries of steel for stampings. Production schedules have been slowed by this; also by decrease in farmers' buying. Surveys show that where railroads have not supplied cars for hauling crops promptly, automobile buying has about "dried up."

To Draw for National Show Spaces

Drawing for spaces in the New York and Chicago national automobile shows will be done at headquarters of the National Automobile Chamber of Commerce, in New York, October 5.

September saw the first real labor shortage in Cleveland and other parts of Northern Ohio, in two years, especially in automotive plants.

Calendar of Coming Events



Sept. 25-Oct. 3—Automobile Show, Kaiserdamm Hall, Berlin, Auspices German Automobile Mfrs. Assn.

Sept. 27-30—Automobile and Accessory Exhibits, Orange County Fair, Santa Ana, Calif.

Sept. 30—150 Mile Race, Fresno, Calif.

Oct. 4-8—Automobile Show, Ventura County Fair, Ventura, Calif.; Paul Hutchinson, Manager.

Oct. 4-15—Automobile Show, Paris, France.

Oct. 12-23—International Commercial Vehicle Show, Olympia, London.

Oct. 16-17—General Annual Convention, California Automobile Trade Assn., Santa Barbara.

Oct. 17-21—Automobile and Accessory Show, County Fair Grounds, Pomona, Calif.; Auspices Citrus Belt Automobile Trades Assn. James E. Granger, Show Manager.

Oct. 18-20—Convention of National Assn. of Farm Equipment Mfrs., Chicago.

Oct. 26-27—National meeting of Society of Automotive Engineers, Detroit.

Nov. 3-11—Olympia Automobile Show, London.

Nov. 10-Dec. 19—Automobile Show, Brussels, Belgium.

Nov. 11-19—Tenth Annual Show Under Auspices of Motor Car Dealers' Assn. of Los Angeles, Praeger Park.

Nov. 13-18—Automotive Equipment Assn. Annual Show, Chicago.

Nov. 30. (Thanksgiving Day)—250 Mile Race, Los Angeles Speedway, $25,000 Purse.

December—Automobile Show, Pasadena, Calif.; Auspices Motor Car Dealers' Assn. Earl C. Lirdley, Secretary.

Jan. 6-13—National Show, Grand Central Palace, New York.

Jan. 6-13—Automobile Salon, Hotel Commodore, New York.

Jan. 8-13—Second National Show, Automobile Body Builders' Assn., 12th Reg. Armory, 62d St. West of Broadway, New York.

Jan. 27-Feb. 3—National Show, Coliseum and First Regiment Armory, Chicago.

Jan. 27-Feb. 3—Automobile Salon, Chicago.

Apl. 19-20—7th Annual Convention, Bankhead National Highway Assn., and United States Good Roads Show of Machinery and Material, Greenville, S. C.

M.A.M.A. "Eats" Prosperity

Times Good and Getting Better, Spirit of Autumn Convention Rich in Essence and in Detail

THE little boy who repeatedly asked a hare-lipped man what time it was, just for the fun of hearing him say it, had nothing on those present at Hotel Lafayette, in Buffalo, September 13-15, at the sixth annual tall convention—the annual credit assembly—of the Motor and Accessory Manufacturers' Association.

Many, maybe most of them, knew that the outlook for automotive prosperity, throughout this year and 1923, is almost irridescently bright—but it tickled them to hear the speakers say so repeatedly.

All else was detail; but most of it was pleasing and all of it instructive.

In addition to the general sessions there were department meetings of the credit, advertising, traffic and export managers of the 397 affiliated manufacturers of parts and equipment forming the association, of which M. L. Heminway is general manager, with hearquarters in New York. In the absence of President E. H. Broadwell he presided at the opening general sessions. Mr. Broadwell is vice president and general manager fo Fisk Rubber Co.

Alfred Reeves, general manager of National Automobile Chamber of Commerce, indicated that September outputs would show a slight slowing up—temporary, and due to the momentum of the four preceding months. One reason for that momentum, he said, was that the makers had taken Herbert Hoover's tip, given in March, and put in good stocks of coal. Mr. Reeves set the 1922 output at 2,100,000 motor vehicles, and that of 1923 at 2,300,000, of which 1,750,000 would replace cars in use. Enclosed cars, he said, probably would form 50 per cent of production two years hence. The used car problem would be worse this fall, and he did not know how to solve the problem.

Don't take used trucks in trade—they should be used till "used up," Reeves said to the credit men. Some of them declared many dealers over-value altogether too much, in taking cars and trucks in trade—and a telegram from R. H. Collins, president of Peerless, declared this a menace to the industry.

The 1925 motor vehicle output will be approximately 2,400,000, and registration about 14,500,000, declared Harry Tipper, business manager of Automotive Industries. The sharpness of the production curve, compared with that of registration, he ascribed to the changing relation between the new market and replacement needs.

This year's dollar volume of the automotive business will be $2,065,000,000—the largest of any business, said C. A. Musselman, general manager of the Chilton Co. Petroleum products he ranked second, at $2,050,000,000—and 45 per cent of that automotive. Iron and steel he ranked sixth, at $1,650,000,000.

Merryle S. Rukeyser, financial editor of the New York Tribune, said Wall Street believes business revival will go much farther than it has. He predicted more buying, and on a more profitable basis.

Numerous telegrams from leaders in the industry were read. They breathed optimism, and told why.

At the advertising managers' conference there was a round table discussion of how to get best returns from advertising. S. E. Baldwin, advertising manager of Willard Storage Battery Co., led. To sell successfully to the users, he said, first sell thoroughly to the dealer—i. e., make a real salesman of him.

Harry Tipper backed this up. He declared advertising to dealers is very important, and has not been informative enough to make the dealer become interested to the point of ardency in talking to prospective users—of whom, Mr. Tipper said, not more than 1-100th of 1 per cent are impressed by attempts to reach them in advertising! Dealers may carry varied stocks, but sell what their hearts are in. Dealers' selling education has been neglected sadly by those who would profit by helping them—they have done very well indeed, under the circumstances, said Mr. Tipper. Alfred Reeves agreed to this. Also, he suggested simple words in ads. Harry Horning, of Waukesha Motor Co., told of the simple power of Lincoln's speech at Gettysburg. Too many hifaluting, hectic superlatives in much automotive advertising, said Mr. Horning—and the way he said it had horns in it. "Dealers do need help," said Mr. Baldwin, "but so do we all. We must help each other, in our problems."

R. E. McKenzie, advertising manager of Timken Roller Bearing Co., said frankly the brand of bearings cannot be sold to the average car buyer; it must be sold to the engineers; but that is easier if the engineers believe users know the brand. Trade paper ads and consumer ads, he said, should harmonize—help each other.

The jobber's indispensability was set forth by T. E. Challenger, credit manager of McCord Mfg. Co., in saying that food products should go the shortest selling route from producer to user, but that automotive products are not handled best that way. Their makers, he said, would do well to seek farther than vehicle makers in view of the growing replacement field—should seek the user, but not directly nor through retailers unless the volume is extremely large. Also, the exclusive-distributor plan restricts sales. "I believe the well organized automotive equipment jobber offers the most economical, substantial, profitable distribution method."

Mr. Challenger praised the "Ask 'em to Buy" campaign, being directed by Ray Sherman, merchandisnig director of the A. E. A., and effective largely through the help of jobbers.

The splendid service given by the association's traffic department again was made clear. It has submitted some 40 briefs in behalf of the industry, resulting in freight rate reductions on bodies, wheels, etc., etc., and the chances for reductions on 60 to 75 products not so far pleaded for are being studied.

The credit department's work also was reported on. It is receiving inquiries only less in number to those in 1919, when there was a crop of new customers every day, apparently; and the inquiries are more in detail.

The "Spirit of Transportation" paintings, sent around the country some time ago by Ezra W. Clark, advertising manager of Clark Equipment Co., Buchanan, Mich., are remembered by many thousands; and he uttered the spirit of this convention when he said: "We do not have to seek prosperity—it is here!"

National Motorists Association Active

No official organ yet, but a weekly mimeographed bulletin, which began late in August, is being sent to clubs in the new National Motorists Association from headquarters in Washington, D. C. Apparently the organization is trying to do all that the American Automobile Association has been assumed to be doing, and to give the impression that it will be done better; except, apparently, racing control. Strong interest in legislative and other factors affecting motorists is indicated.

England May Drop Speed Limit

Germany and France are said to have had no speed limits, at least in the country, and by all appearances in such cities as Paris, for many years. In England, speed traps have been a thorn in the flesh for motorists. Now it is said England will abolish all speed laws, but try to do what should be done to whom it should be done to, if anything "happens."

An Irishman went into a restaurant on Friday and asked: "Have yez any stewed whale?"

"No," said the waiter.

"Then ye can bring me beefsteak," said Mike. "Lord knows, I tried to get fish."—Vaudeville News.

Ford Plants Idle Five Days

Interstate Commerce Commission Backs Down, Coal Supply Sure, So Henry Resumes Flivver Building

FORD Motor Co. closed its immense plants in the Detroit area (Highland Park, 40,000 men; River Rouge, 18,000) September 16 and reopened them at midnight, September 22. The plants at Dearborn, Northville, Lincoln, the sawmill at Iron Mountain and the iron mine at Michigamme, were closed also. So were the 35 assembly plants throughout the country. So was Briggs Mfg. Co., Detroit, employing 4000 men. Hayes Wheel Co., Lansing, laid off 600 men, one-third of its operating force. Many other concerns, in a wide area, were affected. Probably 100,000 men lost, in wages, a total considerably exceeding $500,000 a day for at least 5 full working days; their customers lost some, of course; and another Detroit motor car maker, not named, is quoted as saying Ford plants will not be back on full schedule till late in the year.

Why, is speculative. Not for lack of demand for cars—Ford is said to be 25,000 behind orders now. Perhaps probable hitches in steady coal receipts, and delays due to interruption of other supplies, and to getting so huge a business running at full gait again, were in the commentator's mind. He said, however, that Ford had done what any hard-headed business man, "not having competition," would have done; and that if Ford's action checked inflation everybody should be glad.

The reopening followed the backdown of the Interstate Commerce Commission, and assurance wired by Edsel Ford from Cincinnati of a steady coal supply from West Virginia and Kentucky.

During the closed period, Henry Ford said his company really was out of coal except for the coke ovens at the blast furnaces, and these were fed, instead of the usual 15 tons per charge per oven, only 1 or 2 tons, just enough to keep them warm and so prevent damage amounting to hundreds of thousands of dollars.

The Ford closing did not divert many orders to other makers. This would happen if Ford were closed long—not very long, either—but extended Ford idleness would depress industrial progress everywhere, till relieved by large production by Ford, or someone.

Ford emphatically denied mean motives for his closing. He said neither the main nor assembly plants, distributors, nor dealers, were burdened with surplus stocks.

The chronology of this huge industrial incident follows:

About September 1, Ford said he would close September 16, not because coal actually was scanty but because it was controlled by profiteers. He wanted to check them by lessening demand for coal (by about 40,000 tons a day, his average, plus all that economy by affiliated plants and a large number of persons would account for). He would not accept dubious "bootleg" coal, offered at bootleg prices. He said the Interstate Commerce Commission was playing into the profiteers' pockets by narrowing the use of empty coal cars.

A few days later Herbert Hoover, Secretary of Labor, said prevailing coal prices meant only $1.50 per Ford car more cost to Ford, temporarily. As to difficulty in getting a steady supply of suitable coal at any price, due to the Interstate Commerce Commission's priority order No. 23, Mr. Hoover was not quoted.

On the 5th, replying to a report that a way had been found to bring coal from West Virginia and Kentucky mines, Ford said again he would close. This was repeated on the 13th, when it was denied Ford had arranged with a coal company in Cincinnati.

On the 15th, Detroit news was that machinery and tools in many Ford departments had been given anti-rust treatment. When the night shift reached the River Rouge plant at 11 p. m. it was told to go home and economize.

That day, the 15th, a vital conference was held in Washington by Secretary Hoover and a number of business men. They decided quicker movement would be given to coal, with less opportunity for speculation, if the Interstate Commerce Commission's priority order No. 23 were amended. It was proposed that a priority order paralleling the one for agricultural produce be given to coal, without discrimination as to consignees; also that reconsignment rights on coal should be abolished so as to prevent speculation. Under priority order No. 23, deemed necessary and issued while the union mines were closed by strike, priority was given (1) to movement of coal upon specific orders of the commission; (2) to public utilities, food manufacturing plants, etc.

On the 15th, also, Commissioner Atchison, of the Interstate Commerce body, said that revising order No. 23, as to who should have coal, and giving the commission control of empty coal cars, was not justified; that if it were less stringent sand and gravel (used for buildings and highways) probably would be carried in the cars; and that the rule would stand till the coal situation and general business returned to normal.

On the 16th, Ford kept his word, and closed, except for the coke ovens at the blast furnace plant, and the experimental department. Inventory was begun.

On the 17th, Edsel Ford mentioned but did not identify developments which he said gave hope of early resumption.

On the 19th, E. G. Liebold, Henry Ford's executive secretary, at an important meeting of the special fuel committee of the Detroit Board of Commerce, said the Ford plants could not resume till fuel from Ford's mines was available. At that meeting both rail and industrial leaders agreed in a demand, wired to Washington, that the Interstate Commerce Commission lift the priority ban from industrial plants it had classed as nonessential. Another wired resolution demanded every effort possible to enable Ford resumption and re-employment of about 70,000 men (in Detroit alone). It was announced, on the other hand, that no other large Detroit industries would shut down for lack of coal. Ford is by far the largest coal user there. The visible supply, larger after Ford's shut down, sufficed for the others.

On that same day, the 19th, the Interstate Commerce Commission backed down. Perhaps the Detroit meeting influenced it. No doubt Mr. Hoover's meeting on the 15th did.

On the 20th, at midnight, the Interstate Commerce Commission's backdown, called priority order No. 25, took effect.

On the 21st, Edsel Ford wired home from Cincinnati that a steady stream of black diamonds was assured. The same day his dad, in Dearborn, suburb of Detroit, gave the word to go. Workmen were notified; assembly plants were wired; so were all and sundry, affiliated with Ford—more than 900 telegrams were sent out.

On the 22d—Ford plants very, very busy.

Ford Facts and Figures, Boiled Down

Ford production, the first 7 months of 1922, not including the Canadian plant, was 688,028; same period last year, 544,727. July production this year, 136,646; June, 141,901; July last year, 112,185. Six foreign branches produced 6539 in July, 6876 in June, 7170 in May, 6100 in July 1921. The River Rouge plant produced 9657 tractors in July; 9333 in June. The tractor plant in Cork, Ireland, produced 220 in July, 298 in June.

On September 23, Detroit news was that Charles Sorenson, Ford's general manager but without title, in charge of the River Rouge plant, will step out and that Mr. Ford will give the business more of his own attention. Leo Hurst, head of the drafting department many years, has gone to General Motors.

In August, Wall Street "news" was that Ford's United States net income, at $100 per car, is $500,000 a day. Dow, Jones & Co., financial news vendors, put it at $250,000.

Ford has barred beery and hard liquor breaths or bottles as far as his employes are concerned.

Midwest for Passenger Cars

New Engines, Designed Like Those Used In Highest-Price Machines, Have Remarkable Features

NEW among recent passenger car engine developments are the three 4 cylinder engines developed and manufactured by the Midwest Engine Corp., Indianapolis—model 411, 3⅝x5, with thermo-syphon water circulation; model 412, 3⅝x5, with water pump; and model 410, 3⅜x4½.

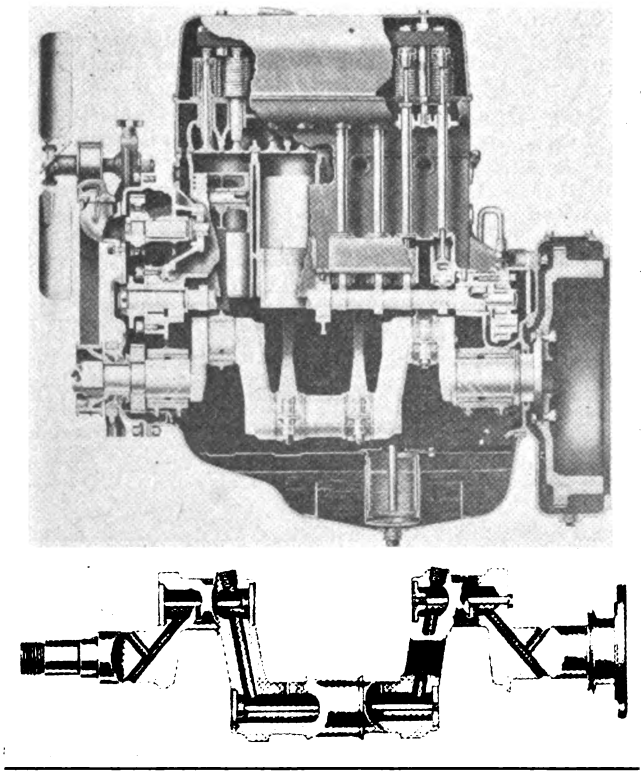
These engines are designed along the same lines as engines used in some of the highest priced cars In them are some radical departures from the conventional, but these are all proved features, distinguishing the Midwest from other engines commercially available.

Lighter weight of the reciprocating parts in these new passenger car engines, compared with the truck engines of equal bore and stroke, is a noticeable feature.

The bearings are exceptionally large, with neither shims nor oil grooves. All bearings are from .003 to .005 inch larger than the shaft and camshaft, this clearance providing for an oil cushion which eliminates approximately 50 per cent of the internal friction usually found in engines using tight bearing fits.

The crankshaft in the 3⅝x5, models 411 and 412, is 2½ inches in diameter, and 2¼ inches in the 3⅜x4½ model 410.

These particular passenger car models have unusually high torque at low speeds and large horsepower at high speeds—the torque peaking at 1000 r.p.m. in both models. As the engine speeds run up to 3000 r.p.m. on the 411 and 410, and 2400 to 2700 r.p.m. on the 411 and 412, and to properly lubricate such large-diameter bearings at such speeds, it was found necessary to "float" them and this is done by making the bearings larger than the shafts, and using no shims or oil grooves in the metal. In fact, the bearings are burnished so as to eliminate any edge or surface which could possible scrape or break the oil film. The oil, then, is forced continually into all bearings in extreme volume, and under high pressure when under load. By thus floating each bearing, a very large percentage of internal friction is eliminated, the speed limit is raised considerably, and the power output is increased (by saving it by the use of floating bearings), compared with that ordinarily developed by an engine of the same size. Use of floating bearings also means more economy in operation, because more power, available for work, is obtained from the fuel used.



SECTIONAL VIEWS OF MIDWEST ENGINE CO.'S MODEL 410 ENGINE AND OF THE MIDWEST CRANKSHAFT.

The engines, like all Midwest engines, are of the valve-in-head type, the valves being made of alloy steel. In the 3⅝x5 the valves are 1⅝ inch in the clear, and lift ⅜ inch. In the 3⅜x4½ they are 1 9/16 inch in the clear and lift ⅜ inch.

The water circulation is either thermo-syphon or by pump on the 3⅝x5, and thermal circulation only on the 3⅜x4½. In both, a notable point is that the cold water is first conveyed direct to the exhaust valve seats, through passages cored in the cylinder block and head, thus maintaining the lowest possible temperature at the valve seats and valves. This avoids warping or burning of valves, permits of free action in the guides, holds compression better under excessive load conditions, and provides long life to valves and seats alike.

The super-cooling provided allows an extremely large volume of water to circulate about the head and cylinders, which keeps the temperature of the engine within such limits that high compressions are used. In models 411 and 412 the compression is 90 pounds and it is 95 pounds in model 410—the latter engine being cooled thermally as stated. As the fuel in use becomes heavier and more difficult to handle in the average engine, it is the Midwest practice to increase compression so that heat generated by higher compression can be used in handling such heavier fuel to better advantage and, because of that, get still more economy in fuel.

The lubricating system in all Midwest engines may be termed a constant delivery type. The oil is delivered to every bearing, except to the wrist pin bearings, continuously and under pressure, regulated in proportion to the load on, instead of speed of, the engine. This provides lubrication when needed. Regulation is by means of a by-pass valve located over a groove around the front bearing, this valve being operated by the vacuum in the intake manifold above the carburetor throttle.

The crankshaft is drilled with one continuous passage for oil, all the way from the center of the front bearing to the center of the rear bearing. Oil is taken from the sump by geared pump and forced into the circular groove around the rear bearing, from which it enters the crankshaft no matter in what position it may be, the oil from that point passing through the shaft, in large volume and at high speed, to all bearings continuously. There is no point in the revolution of the shaft when oil is not being forced into the connecting rod bearings. This is stated to be different from any other commercially made engine, and to be the controlling factor which permits of such high engine speeds, and also makes shims unnecessary—for where there is no wear there is no need of adjustments.

The oil, on reaching the front bearing, escapes into the gear case cover from under the by-pass valve if the pressure exceeds 50 pounds, at which point the vacuum exceeds the spring tension which normally holds the valve closed. The action of this regulating valve, and its effect on efficient and economical lubrication, is simple yet remarkable.

Each camshaft bearing is lubricated through a passage from the main bearings. The piston pin bearings, which are carried in the piston (the pins being locked in the rods), are lubricated by oil scraped off the cylinder walls next to the water jacket, where the lubricant has a high lubricating body, instead of taking it from the inside of the piston head chamber, where its value has been reduced by excessive heat. The lower side of the bottom ring is used to scrape oil from the cylinder wall, and from a point directly over the bearing a lead carries the oil under the ring direct to the top of the bearing—the point of highest pressure.

The sides of the pistons are slightly relieved so that a large amount of oil is available for this purpose.

By locking the wristpin in the rod and putting bronze bushings in the piston, fully 50 per cent more bearing area is obtained. As the bearings at that point carry the highest bearing pressures per square inch of any in the engine, it is essential to provide as large areas as possible and supply them with a large volume of the best lubricant possible to put into them. This construction has proved its worth under excessively hard service.

The engines are entirely enclosed, and no dust can enter except through the carburetor. An efficient air cleaner would complete the job. The breathing is through the tubes enclosing the push rods, the oil vapor and spray being carried up into the valve chamber, thus lubricating all valve stems, rocker arms and contacts. The rocker arms are designed to "rock" at all points of contact instead of having journal types of bearings; hence, as all parts are of hardened steel and ground, wear practically is eliminated.

All valve adjustments are made from overhead, a lock nut and adjusting screw being used, these being carried in a bar running across the head from end to end. By removing the valve cover the valve adjustments are made easily, with plenty of space to work in, and without any danger of being burned by contact with hot manifold.

Particularly interesting are the performance tables of these new 4 cylinder Midwest engines. At 400 r.p.m., models 411 and 412, of 3⅝x5 bore and stroke, show 9.1 horsepower, torque being 119.1. Horsepower increases to 52.5 at 2400 r.p.m., then decreases somewhat. Torque increases to 132.0 at 1000 r.p.m., then decreases. Model 410, 3⅜x4½, shows 7.16 horsepower at 400 r.p.m., 35.60 at 2400 r.p.m., then decreases. Torque, 94.0 at 400 r.p.m., is 100.2 at 1400 r.p.m., then decreases.

The company has issued full descriptions of its models, including details of the method by which load, not speed, regulates oiling, and performance tables.

To Stabilize Raw Rubber Prices

London news is that Edgar B. Davis, of New York, urges the Rubber Growers' Association to favor a $25,000,000 corporation, with some United States capital in it, to stabilize raw rubber prices, extend its uses, cut overhead, and so on, thereby reassuring investors in securities and helping all concerned. He said that though only 2 per cent of the rubber acreage of development of the automotive industry in the United States is controlled here, yet this country has prevented the market from sinking deeper than it is now; and that this cooperation is worth tying up to by the Britons.

The unstable condition of the world's rubber producing industry is discussed in an official report of a British investigating committee, received recently by the Bankers Trust Co., New York, from its English information service. According to the committee's report the rubber growing countries of the world have an estimated productive capacity, in 1922, of 400,000 tons of crude rubber, while the year's estimated consumption will not exceed 300,000 tons. The committee also estimated that the world's stored stock of crude rubber on January 1, 1922, was 110,000 tons in excess of the necessary reserve for the year. The estimates were based on detailed statistics.

Big Chicago Automobile Bank Planned

A combined $500,000 automobile bank and warehouse is planned in Chicago; the ground floor of a 16 story building to be used for automotive banking needs, upper floors by dealers.

Lem Loosehead says: The perfect driver is yet to be found, I see b' th' paper. Never, ez long ez so many people sleep on their feet.

New 1923 Haynes "Sports"

Four De Luxe-Equipped Types, Called Just Smart Enough, Are Said to Presage the Style

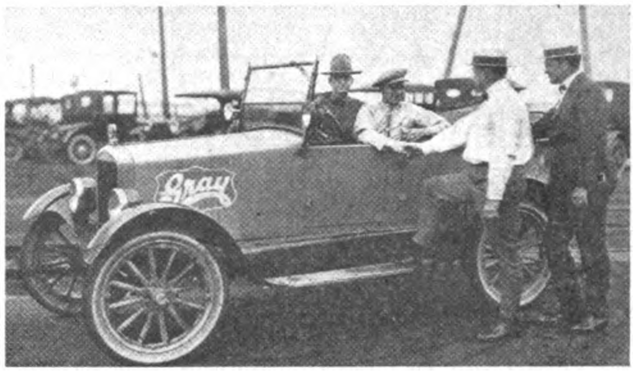
THE Haynes Automobile Co., Kokomo, Ind., announces a complete new series of fully equipped sport models, both open and enclosed styles, designated as the new 1923 Haynes 55 sport models. The series comprises a 5 passenger sport touring car, 2 passenger sport roadster, 3 passenger sport coupelet, and 5 passenger sport sedan.

All are fully equipped with the most modern, approved accessories, and are made more attractive by de luxe appointments, such as six disc wheels, with six tires and tubes, the two extra wheels being mounted on the sides of the body at the front; polished protection bars at the back of the body; a smart looking trunk, conforming to the nickeled radiator; ornamental radiator cap and headlights; Boyce motometer; special Haynes design sun and vision visor; latest style windshield wings on the sport touring car and sport roadster. The open cars are handsomely trimmed in brown Spanish leather. Handsome bumpers are standard, front and rear, on all the models. The attractive, clear vision top for the sport touring car and sport roadster, in either black or rubberized khaki, is standard. A cloak strap adds to the completeness of the appointments.

All of the new models have 121 inch wheelbase chassis, and are finished in a beautiful deep maroon. Six cord tires 32x4½, are standard.

Among the notable features of each of these 1923 sport models are the new, individual steps of highly artistic design. The steps are exceptionally wide and have a high, protective flare on each side. The new crown fenders lend a pleasingly finished appearance to the entire car.

"Although the step we have taken in supplying such completely equipped cars is more or less radical in the history of the industry, yet there is nothing extreme in the appearance of the new sport series," states Gilbert U. Radoye, director of sales and advertising. "We have been very careful to follow a conservative design for the equipment and appointments The new models possess just the desired amount of smartness to satisfy the most fastidious car owner. They leave nothing to be desired in the way of appointments or so-called 'extras.' They are complete, ultra-modern automobiles, presaging 1923 style and design."



GRAY CAR NOW EASTBOUND ON CROSS-COUNTRY TEST RUN.
Motor West of September 15 told of the first Gray car reaching San Francisco, September 12, from Detroit, on a long test run. It now is on its way to New York. The picture shows it on its leaving the Gray Motor Car Corp. factory in Detroit for this coast. F. L. Klingensmith, president, and F. F. Beall, vice president, are saying goodbye to Capt. A. B. Walton, observer for the A. A. A., and Leo De Clark, driver. With equipment and supplies, the car carries the equivalent of a 5 passenger load. Nine months ago the Gray car was in the blue print stage. Since then, work that often occupies two years has been done. Sixty cars per day are being produced. Two day's production, 40 carloads, recently went to the New England distributor in Boston.

More Powerful New H.C.S.

Chassis and Bodies of Sport Sedan and Touring Models in Series IV Called Revelations

TO explain why Harry C. Stutz does some things in the way he does them, a most interesting 4 page story printed by H. C. S. Motor Car Co., Indianapolis, tells how he upset a tradition that had been set by a generation of automobile designers, and in four years of study solved one of the most perplexing riddles of automobile design, when he selected the "right" medium wheelbase—one with the advantages but not the disadvantages of short or long wheelbases.

He was told he could not make it succeed, but he did—by making all the factors fit the idea of heavyweight comfort and lightweight economy. He used cold pressed frames made of the best known alloy steel of the straight-tapered type; all-vanadium steel so as to use thin, wide, long spring leaves; a drive through a torque tube instead of through the rear springs; and so on—everything wider, deeper, thicker, tougher, so as to accomplish in one type of chassis what he had found neither short nor long types did. With these factors, combined with his engine, of savage-like power, yet smooth action, plus positive lubrication of every moving part no matter how small, plus uptodateness and, above all, quality insisted upon, his final result was a motor car running 18 to 20 miles per gallon of gasoline; 1000 to 1100 miles per gallon of oil; 18,000 to 20,000 per set of tires; and six years or more of good service, such as he had not found possible for cars having long or short chassis.

Built on this basis comes the new H. C. S. chassis, series IV, examination of which, the company states, will be a revelation to purchasers who look at more than externals.

Also, built according to the same principles, is the series IV sport sedan. The company claims H. C. S. engineers were first to build a closed car both strong and light, one of best quality and usable for touring. The new model is described as "the style of 1927 in closed bodies for touring;" not so large as to be sluggish, bulky or clumsy, not so small as to be chubby, cramped or tiny; everything about it trim and cozy; a composite construction—solid aluminum body over a heavy wood frame; a car with aluminum steps and other up-to-the-minute fixings, including leather-trimmed, steel-bound luggage trunk; a car of such gear ratio in the rear axle as to be capable of remarkable performance; gentle to handle in the snarls of traffic, and its medium size making it easy to park at a curb.

Concerning the series IV touring car, the makers say H. C. S. "set, nearly three years ago, the touring car body style that today is being copied by twenty other makers." The appreciation which greeted the compact, trim, comfortable, butterfly-balanced series III model is cited, and then are told facts about the series IV model—larger engine bore, adding 7 to 10 horsepower; small operation cost; improved design; roomier body and seats; lighter pistons; smoother starting; larger, perfectly hung bearings; and wire wheels; all giving much more fuel and tire mileage.

N. A. C. C. Tariff Tips Are Taken

Alfred Reeves, general manager of National Automobile Chamber of Commerce, reports that practically all tariff suggestions of the N. A. C. C. were retained by the Senate-House conference committee. Automobile duty was fixed at 25 per cent of foreign value. Specific bargaining, although removed from the automobile item, is provided in a separate clause; discriminations abroad will be discouraged; the President is to be authorized to decrease or increase duties by one-half, depending on whether countries in which the imports originate favor or discriminate against American commerce. Complete embargoes, being possible, will prove helpful in foreign countries where American goods are shut out in favor of competing nations. Duty on re-imported "war" vehicles remains at 90 per cent under certain provisions. Crude aluminum is subject to duty of 5 cents per pound. Ball bearings are dutiable at rate of 45 per cent plus 10 cents per pound, which is the original rate of the House and lower than that proposed by the Senate.

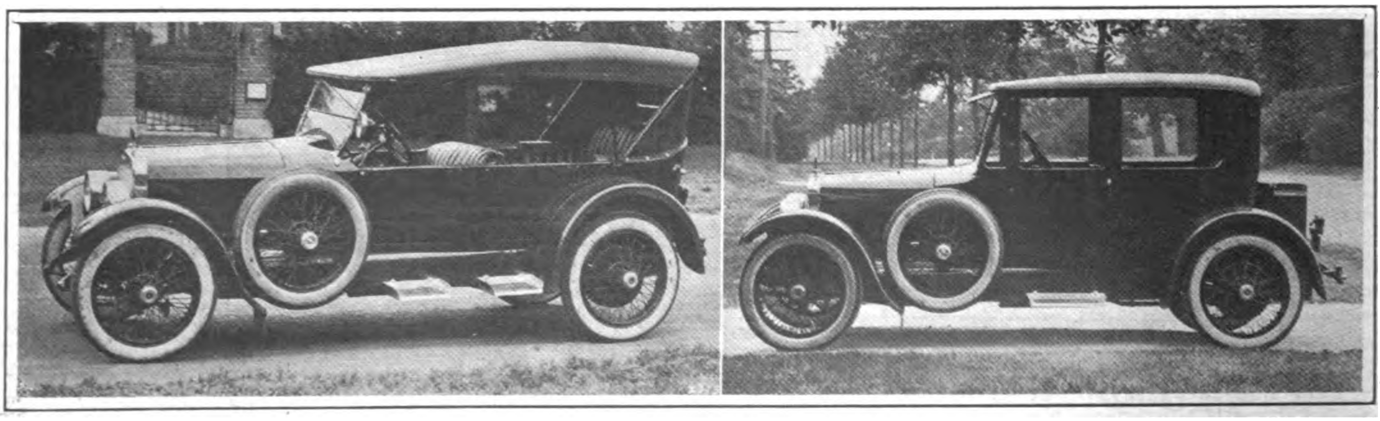
New Way to Make Gasoline

There have been so many processes developed, the past few years, which have been heralded as "the only real solution" of the gasoline problem, that oil refiners have become almost deaf to requests for hearings from "gasoline" inventors. Industrial Digest tells that in France a new process recently has received careful and official attention of French governmental administrators interested in the problem. The process is called Seigle. It is said to produce gasoline from crude oil, shale oil, various heavy oil products, and even still residues, in one step, in contradistinction to the cracking processes known and used up to the present time, which require two distinct operations. The process is said to work successfully and to produce a very high yield of gasoline. It has also been proved that the gasoline product will dissolve perfectly in alcohol, a fact of special importance in the manufacture of composite motor fuels.

Country's Gasoline Record Broken

Late in September the Bureau of Mines announced July gasoline production was 559,711,415 gallons, breaking the country's record for one month. It exceeded the output of June by 44,000,000 gallons; of May by 56,000,000; of July last year by 150,000,000.

Consumption also broke record in July—566,000,000 gal-



THE TOURING AND SPORT-SEDAN MODELS IN THE NEW SERIES IV OF H. C. S. MOTOR CAR CO., INDIANAPOLIS.

lons, compared with 507,000,000 in June and 457,000,000 in July last year. Stocks thus were reduced 52,000,000 gallons by the end of July, or 6.31 per cent compared with July 1. On August there was a mere total of 772,908,949 gallons on hand.

Gasoline imports in July were 4,840,098 gallons; exports 58,630,402; shipments to insular possessions 1,866,789.

Kerosene output in July was 192,924,420 gallons; 324,586,128 gallons were on hand, August 1, an increase of 7,000,000 in July. July exports were 50,398,000 gallons, and 419,000 gallons went to insular possessions, these two items totaling 21,000,000 less than June.

Fuel oils and oil gas production in July was 595,028,518 gallons—56,000,000 more than in June. Fuel oil stocks, August 1, totaled 1,358,870,284 gallons, an increase in the month of 32,000,000 gallons.

July output of lubricating oils was 91,714,987 gallons, exceeding June by 11,577,000 gallons. Stocks, August 1, totaled 226,690,749 gallons—213,000 gallons less than on July 1.

The huge quantity of crude necessary to use, to meet the tremendous demand for gasoline, burdens the oil men with "heavy stuff" for which no adequate use has been found; and as "a man must live," the oil man feels compelled to get most of his profit from gasoline users.

Approves Export Feature in Tariff Bill

The newly agreed upon export features of the United States tariff, assuring equality of treatment in non-manufacturing as well as industrial countries, will stimulate American automotive trade abroad, according to J. Walter Drake, chairman of the National Automobile Chamber of Commerce foreign trade committee.

"Under the general export feature the newly lowered automobile rate of 25 per cent, if conditions warranted, could be increased by one-half, bringing it up to a maximum of 37½ per cent," says Mr. Drake. "If some manufacturing country were unwilling to allow a duty as low as 25 per cent on American vehicles in return for an equally low rate on its automobiles brought into the United States, steps could be taken to have a higher rate up to 37½ per cent apply.

"In the extension of our trade with non-industrial countries, the general export feature of the tariff also will prove helpful. Finland is one of these countries. At the present time American manufacturers are at a handicap there, because French exporters pay a duty of 10 per cent, compared with 40 per cent assessed on United States automobiles. With means now being provided, such discrimination would be discouraged either by concessionary or higher duties on paper and other products imported into the United States from Finland."

New Tire and Rim Body Active

An event of value occurred August 31, when the incorporators of the Tire & Rim Association of America, Inc., met. This new body takes over and continues the activities of the Tire & Rim Association, and provides for complete representation of the tire, rim, wheel and related parts industries. It covers the entire field of tire and rim standardization while continuing the work of rim inspection, and its plans include close co-operation with other bodies engaged in related work. In addition to the home office in Hartford, Conn., the new association will continue to use the offices occupied by the Tire and Rim Association in Leader-News Building, Cleveland.

Holmes Air Cooled Four Finished

Plans for reorganizing and refinancing Holmes Automobile Co., Canton, O., are being worked out. It is announced the company has completed a new 4 cylinder air cooled car which has been developed during the past year, and expected to sell for about $1200.

3000 drivers went to jail in New York City in 1921.

For Dry Cell Standardizing

Commerce Department Is Pleased by Saving Possible, as 150,000,000 Per Year Are Marketed

AN IMPORTANT feature of the standardization program of the Department of Commerce is the elimination of useless sizes. In almost any line of manufacture, there is room for considerable improvement of this sort. Certain sizes of articles are made because at that time they are necessary to fit into some particular kind or size of machine or receptacle which, perhaps, later on becomes obsolete.

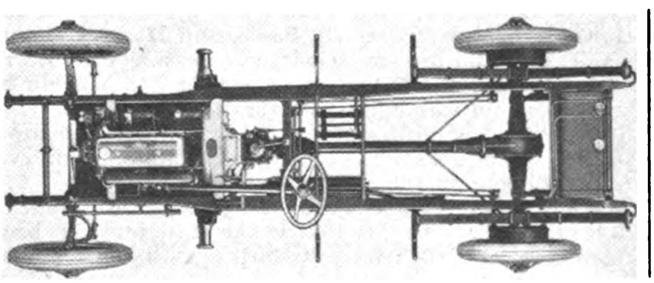
Everyone uses dry batteries for some purpose, either to ring a door bell, furnish ignition for a gasoline engine, or as a source of illumination in flashlights and similar devices. In the latter field particularly a large variety of devices exists. Flashlights in certain cases are regarded as novelties and are, therefore, made in distinctive styles, for better sale. Heretofore, this meant that a large number of sizes of batteries must be used to fit the different sizes and styles of cases. There is no reason, however, why standardized batteries should not be used, the cases being made to fit them.

With the purpose of standardizing, so far as possible, specifications for the sizes of commercial dry cells, the Bureau of Standards recently called a conference at which the majority of manufacturers of such batteries, together with a large number of users, were represented. The work was not altogether new to the bureau, as considerable progress had been made along the line of dry cell standardization during the war in co-operation with the War Industries Board. At this conference 17 sizes of the larger dry cells were considered and 7 of these were recommended as standard; 30 different sizes and kinds of flashlight batteries were considered and 8 of these adopted as standard sizes; 2 sizes of batteries for use with radio apparatus were also recommended as standard for use with wireless outfits.

It is expected elimination of many sizes for which there is little demand and which no longer will be considered as standard will result in a considerable saving in the cost of manufacture, and, consequently, added economy and convenience to the public. When it is considered that on an average 150,000,000 dry cells are sold each year, this is important. Beside the elimination of useless sizes, specifications were adopted for the performance of dry cells which, it is believed, will assist in securing more uniform product. Beside the important work accomplished by this conference, it is of interest as showing the hearty co-operation which is being furnished the Department in its standardization work.

Oh, Joy! A Perfect Muffler

According to recent announcement by the U. S. Bureau of Engineering, its experts have practically perfected a muffling device which not only affords almost complete muffling but with a very light back pressure.



SERIES IV CHASSIS OF H. C. S. MOTOR CAR CO.

Painful Kansas City News

Dedication of New Track Marred By Sarles' Death and Injuries to Nine Others in Race

RAIN preventing on the 16th, Kansas City's new 1¼ mile board track, built by Jack Prince, was dedicated on September 17 by means of a 300 mile race. A share of the monetary benefits went to the American Legion, members of which also must have gotten reminders of their experiences Over There—for Roscoe Sarles was killed and nine others in the race, and one spectator-rescuer, were injured more or less severely.

Tommy Milton, Leach special, won the race in 2:46:52.96, averaging 107.77 miles per hour. Harry Hartz, Hartz special, was second, 2:47:10.28; Frank Elliott, Leach special, third, 2:49:46.60; Ralph Mulford, Duesenberg, fourth, 2:50:45.38; Jerry Wanderlich, Duesenberg, fifth, 2:55:46.47; Bennett Hill, Miller special, sixth, 2:56:10.05.

There were 17 entries, 15 starters and 8 finished. With those named, these started: Jimmy Murphy, Murphy special; I. T. (Red) Fetterman, Duesenberg; R. J. Brett, Frontenac; Roscoe Sarles, Durant special; Howard (Howdy) Wilcox, Peugeot; Eddie Hearne, Disteel-Duesenberg; Joe Thomas, Duesenberg; Leon Duray, Frontenac; Peter De Paolo, Junior special, a Kansas City car. Two others who entered—W. W. Browne, Junior special, and Ora Halbe, Frontenac—failed to qualify.

Milton, who made two pit stops, took the lead from Murphy at the end of the first lap and held it nearly half through the race. In the 109th lap Elliott took the lead sensationally, and held it till the 120th; then to the pit with tire trouble. Almost immediately Milton went to pit—same reason; and he got such service that he was off and had Elliott lapped before the latter was fairly under way. Later, with both at their pits again, Hill took the lead from Mulford, these two having been close to the others all the way. Hill went to pit in his 203d lap and soon after had motor trouble but went through. Milton kept the lead from the 204th lap to the end; and he didn't have anything even faintly like a walkaway, at any time in the race. Competition was such that he "threw rubber" spectacularly and riskily, when he should have been at the pit.

Murphy had it out with Milton for the lead in the first 50 miles. After that, especially due to several mishaps, the fast bunch was Milton, Elliott, Hill and Mulford. Yet Hartz finished second. He went to pit only once, in his 121st lap, but most of the time was behind several others; then, about his 230th lap he slid into second place and stayed there. Elliott did wonderfully well considering the time he spent at his pit. So did Mulford, who ran out of gas at his 239th lap. Hill might have ended much better but for his troubles, which may have helped Wanderlich beat him for fifth money. The six winners received $10,000, $5000, $3250, $2750, $2250 and $1750, respectively.

The casualties were: Roscoe Sarles, burned to death; Christopher V. Pickup, his mechanician, badly burned; Joe Thomas, left leg broken; Raymond Curley, his mechanician, bruised; Eddie Hearne, bruised and cut; Eddie Heffernan, his helper, right arm broken; Jimmie Murphy, small cut under eye, some bruises; Ernie Olsen, his side kick, slight bruises; Peter De Paolo, and Harry Henning, his aide, cuts and bruises. George Lynn, a spectator, responded to Sarles' call for help when he was beneath his blazing car, and was burned on the face and arms. C. P. Hutchins, F. S. Smith and J. C. Love, other spectators, also tried to help—as did Pickup, Sarles' mechanician, even after his plunge off the high rim of the bowl.

Murphy's car supplied the first mixup, at about 50 miles. He blew a tire as he left the turn for the backstretch, swerved down into the dirt, and the dust blinded Thomas, behind. The cars were badly tangled; wheels came off; Thomas' car had a rear axle broken.

Hearne also was thrown by a tire, approaching the main grandstand. His car overturned repeatedly. As he and Heffernan lay prone on the track, a great sigh went up from the crowd, which gave plenty of evidence later that it didn't want gore, but sport—it showed marked disapproval when contestants kept on while their tires threw rubber high in the air. Hearne's car was low on the track and did not block it.

De Paolo's car skidded off the track and caught fire.

Sarles' fatal mishap, charged to a broken steering knuckle, was on a turn. It was hidden by trees from the crowd, which saw Sarles' car go into the turn; an umpire saw it fail to make the turn and go straight to the upper edge, where Pickup tried to jump but failed and went on over with Sarles and the car. The crowd, waiting to see them emerge into the backstretch, saw, instead, smoke from the burning car, rising above the trees.

It is said the excess prize money, $6000, may go to Sarles' widow. Sarles had not entered for the race, but substituted for Cliff Durant. F. G. Comer, in charge of the Durant racing team, had intended to be Sarles' mechanician, but yielded to Pickup, who wanted to get into racing. Pickup's heroic efforts to save Sarles showed the kind of stuff he is made of.

Telegraph rumors reached the Pacific Coast that the track was wavy and dangerous, but these are contradicted by news sent as well as brought personally to the Coast. It appears the only way the track may have contributed any danger was due to its having been rained on the day before the race.

Two veterans, Louis Chevrolet and Barney Oldfield, occupied the pacemaking car.

Attendance, "before auditing," was estimated at 56,000. Grandstand B was only two-thirds full.

The fact that the meet was in honor of the American Legion made it an exceptional affair. The governor of Kansas, the mayor of Kansas City, and other notables, spoke, their voices reaching all parts of the main grandstand through amplifiers, after first going 8 miles to the Kansas City Star and returning from its radio transmitter to receiving sets. Aerial bombs and planes were features.

Cars Increase Salesmen's Profits

"We have demonstrated that each salesman's sales increase from 40 to 100 per cent as soon as he begins to operate a motor car," writes E. D. Voorhis, general sales manager of the H. D. Lee Mercantile Co., in a recent issue of System.

"This is because he makes from six to eight towns a day where he formerly made from one to four; and it gives him the additional advantage of being able to carry along with him a quantity of advertising matter which he can place to the best advantage at strategic points."

Michigan Arm Signal Code

A code of arm signals has been adopted in Michigan. The state's department of public safety has taken the matter in hand and it is hoped the signals will be adopted generally. The code suggests that when a motorist wishes to turn to the left he hold his left arm out horizontally; when he wishes to stop he hold out the left arm straight but pointing downward, and that when he desires to make a right turn he bend the arm so that the upper arm is horizontal and the lower arm vertical, with the hand pointing upward.

One Car Per Family in Ponca City

Ponca City, Oklahoma, claims that it leads all other cities in the ratio of cars to population, according to the Oklahoman, of Oklahoma City. It has more than 2500, an average more than one for each family.

The average annual pay of rural postmen using motor vehicles is $2570, as compared with $1830 for those using horse-drawn vehicles, according to the latest report of the Postmaster General.

November 1st and 15th

Los Angeles Show Numbers

THESE two issues will be largely devoted to a resume of automotive trade conditions in Southern California, the greatest 365-days-in-the-year sales territory in the United States.

ADVERTISING copy for November 1st issue can be handled up to noon October 31st. The deadline for November 15th will be the last mail November 13th.

Motor West Publishing Co.
INCORPORATED
911 Marsh-Strong Bldg., Los Angeles, Cal.

In Foreign Fields

Maxwell Vice President On Europe

A. E. Barker, vice president of Maxwell Motor Corp., returned recently from Europe, where he made a thorough survey of automotive trade conditions. In the course of his visit Mr. Barker, accompanied by London representatives, traveled by Maxwell sedan more than two thousand miles throughout England, calling on Maxwell dealers. Everywhere he found that the design, appointments and economical performance of the good Maxwell line are making a strong appeal. The touring car—and the enclosed cars in particular—were almost invariably referred to as the most striking illustration America has sent abroad of the possibilities of massed manufacture when concentrated upon the production of really beautiful and finely finished cars.

Mr. Barker says that for obvious reasons England is not for the moment, and cannot be, until recovery is more complete, a large market for American cars. English business, big and little, is fighting vigorously and doggedly for a return to better conditions.

In France, conditions are, of course, prohibitive, and the same is largely true of the rest of Europe.

"It would be presumptuous," says Mr. Barker, "to offer any comment on European political or economic conditions, but underneath discouraging surface conditions, the nations most concerned undoubtedly realize the desparate necessity of continuing to struggle toward a solution."

Says We Are Not Thorough

The favorable prospects for increasing foreign trade are encouraging automobile exporters to strengthen their export organizations in foreign countries. In addition to those manufacturers who already have established branches abroad, a number of newcomers are entering the field. This trend is particularly noticeable among manufacturers of automobile parts, accessories and service equipment.

With the increasing export activity, however, says Industrial Digest, the shortcomings in foreign trade methods of automobile manufacturers become more apparent, and it is reported that their unfavorable results threaten to impair American good will abroad. Failures in export business are due chiefly to faulty approach to the foreign buyer. Foreign inquiries are said to be answered in a condescending tone. Solicitations of business often do not give sufficient information in regard to the standing, size and activities of the firm making the offer, and in many cases, prices are not quoted.

Britons Seek New Taxing Method

The British Ministry of Transportation has decided to invite suggestions for a new method of motor vehicle taxation, which will lighten the motorist's burden but not decrease revenue, according to the Automotive Division of the Department of Commerce. This is due to the expression throughout the country at the present time against the high taxes on motor vehicles.

British Production Still Short

Assistant Trade Commissioner Park, London, in a report to the Department of Commerce, says the serious dislocations caused by the engineering lockout during the first part of this year in the British automotive industry have proved very difficult to overcome.

The export trade continues to decrease, while imports of foreign cars have steadily increased despite the 33 1/3 per cent import duty. The United States and Canada remain well in the lead in British imports of passenger cars, which are dutiable, while France and Italy are ahead with respect to complete motor trucks, which enter the United Kingdom free. Sales of American cars in the British market have improved steadily and will continue to hold a good market as long as they give better value for less money, as is true at the present time in many cases. Recent price reductions have been made by the representatives of several American cars, due to satisfactory increases in business.

German Omnibuses Used in Peru

Five German Benz buses are being used between Lima and the suburb of Miraflores, in Peru, northern republic on the West Coast of South America. According to the automotive section of La Prensa it is understood that 15 more have been ordered, with the proposal of extending the bus service to other suburbs. Assistant Trade Commissioner Turner, Lima, says these buses seat 40 persons, 20 in each deck—and will charge a fare only a little in excess of that charged by the trolley lines and consequently will cause considerable competition with the street railways.

It is estimated there are but 2000 potential purchasers of automobiles in Peru at present, in addition to the 3000 present owners, says Acting Commercial Attache Dunn, at Lima, in a report to the Automotive Division, Department of Commerce. However, these will not buy new cars until financial conditions improve. The market will be limited to replacements for the next 2 or 3 years—not more than 300 cars per year. The constant changing of hands of cars already in Peru seriously affects the market for new cars.

Argentina's Truck Possibilities

As long as 40 years ago a bright North American was told by arrogant, unintelligent export houses that he couldn't do it—but he did. He took a cargo of United States products out of port under the noses of the export barons, to Buenos Aires; used his Yankee personality in a breezy but thoroughly friendly way; entertained in spreadeagle style; and, disregarding even the Argentine import houses, sold direct to both wholesalers and retailers—including flour to bakers—and cleaned up a good sum.

Any good way to get business will do. No doubt there is a best way today. Anyway, Argentina today has vast corn areas—it is second only to this country as a corn producer—and it is said enterprising truck men—tractor men, too—might do much worse than get in touch with possibilities in the huge South American commonwealth. Buenos Aires is the place to go to.

Imports of automobiles into Argentina for June, 1922, totaled 537 cars, of which 524 came from the United States and 13 from Europe, according to advices from Commercial Attache Edward F. Feely, Buenos Aires.

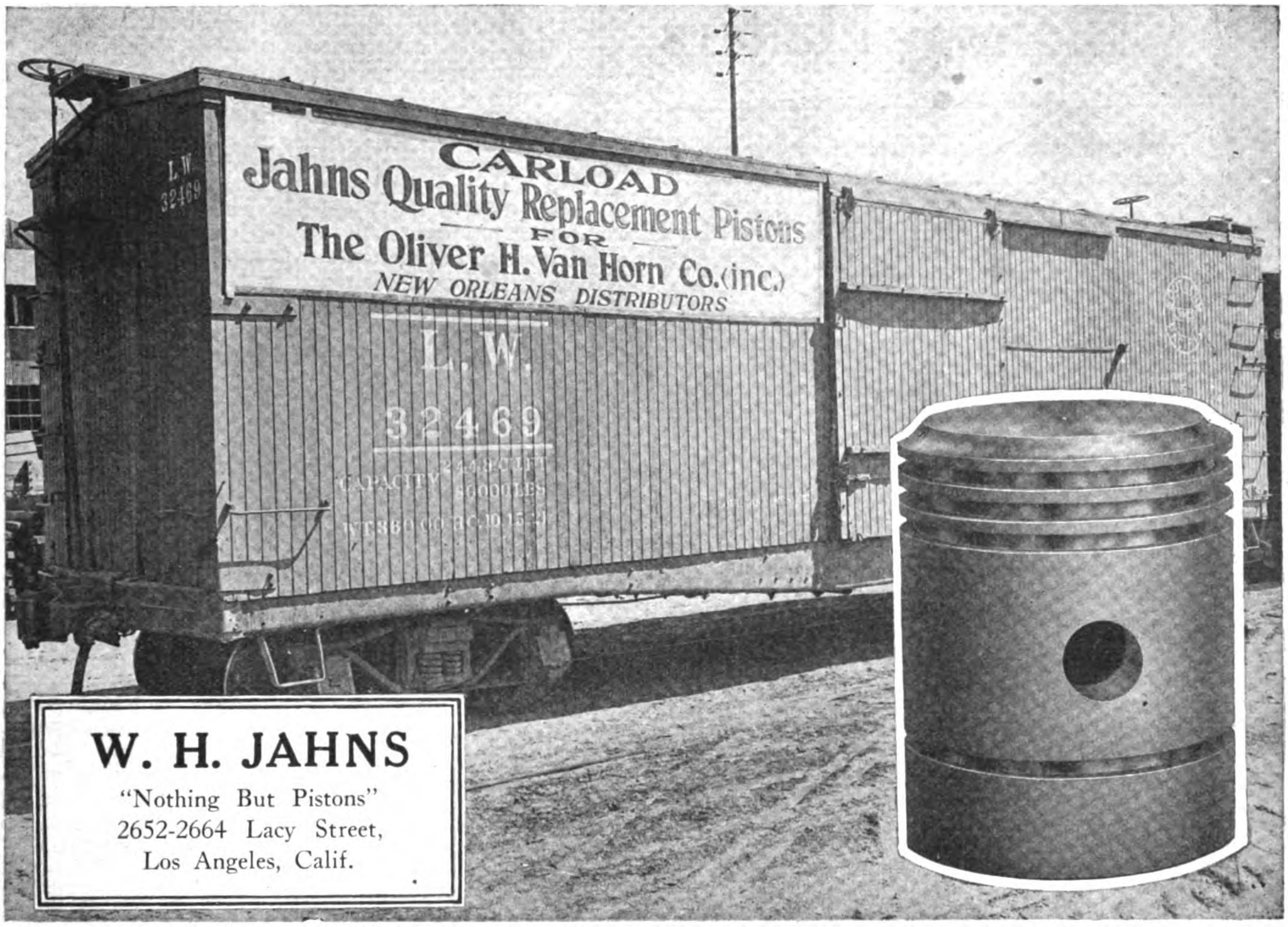
American Cars Lead at San Luis Potosi

Although only comparatively few automobiles are being imported into the San Luis district, in Mexico, at present because of general depression, there is a marked tendency toward increased importations. The demand, mostly for light, well constructed cars, preferably with a short wheelbase, will grow when better roads are constructed, there being little more than 60 miles of roads in the vicinity.

Vice Consul Anderson advises the Department of Commerce that practically all the automobiles are shipped in carload lots via Laredo, Tex., only the more expensive ones being imported separately. Accessories, for which there is a good market, usually are obtained from jobbing houses in Mexico City.

Dodge Brothers Donation to State

Eleven tracts of forest and lake sites have been donated by Dodge Brothers to the state of Michigan for motorist, picnic and camping parks. The parks total 627 acres, and are within 50 miles of Detroit. The idea is, a memorial to the late John F. and Horace E. Dodge. Ten of the parks have large lake or river frontage, and the other is a rugged, mountainous tract.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Some Car and Truck Prices Changed

Gary trucks, product of Gary Motor Co., Gary, Ind., are higher in price, by $100 to $350, on the 5 models, effective October 1.

Essex prices dropped about $50, September 22.

Hawkeye trucks, made in 3 models by Hawkeye Truck Co., Sioux City, Ia., were reduced in price September 15, by from $125 to $505.

Hudson super-six prices dropped about $120, September 15, except on the sedan.

Overland prices dropped, September 18, reductions ranging from $20 to $55.

Paterson cars, made by W. A. Paterson Co., Flint, Mich., were reduced in price September 1, comparison showing a $160 drop on the 5 passenger touring and $200 on the 5 passenger sedan. A 7 passenger touring and 5 passenger brougham complete the line.

Willys-Knight prices were reduced by $40 to $145 on September 18.

Production Begun on Courier Six

Plans of Courier Motors Co., Sandusky, O., successor to Maibohm, are to build 750 cars before this year ends. Next year's schedule is for 3000 to 4000. The company has retained most of the old Maibohm distributors. A number of new ones will be added. Production has begun on the custom-built 6 cylinder models announced recently, and it is stated that orders on hand will keep the plant at capacity for many months. The Courier car, while retaining the Maibohm body lines, has many new mechanical features.

Touring to Canada Increases Hugely

The Canadian Department of Customs reports a 600 per cent increase of motor traffic into Canada, 617,285 automobiles having entered Canada for touring purposes during the last calendar year, as against 93,300 for the previous one. Of the total arrivals, 615,074 cars remained in the Dominion less than a month, and 2211 longer but less than 6 months. This traffic represents an expenditure in Canada of more than $108,000,000.

To Ease Willys Corp. Settlement

It is proposed to form a new company, to take over Willys Corp. assets and float a $6,000,000 issue of 3 year, 7 per cent notes, and 200,000 shares of no-par common, so as to lift final settlement of Willys Corp. affairs out of the expensive judicial process. The plan provides for a possible 30 per cent dividend on approved claims in October, paying mechanics' liens and expenses in cash; and so on.

Highway Matters

From the Bureau of Public Roads

THE Bureau of Public Roads, in the Department of Agriculture, administrates the Federal road aid funds which are provided for periodically when Congress refinances the Post Office Department. Why the funds are supplied in this roundabout way is one of the developments of Congressional procedure.

The Forest Service, also in the Department of Agriculture, passes on so-called forest road applications, but final approval and general supervision is vested in the Bureau of Public Roads, which also handles applications for "post" (commercial) roads, submitted through state highway departments.

Congress failed to refinance Public Roads, the valuable magazine formerly issued by the bureau, but the public is served better than before in respect to current highway news, which is made part of the Department of Agriculture news sheet, sent broadcast. What follows is from this sheet.

—

The bureau's report for July showed the country then was 600 miles nearer the ultimate goal, which is to be a system of approximately 180,000 miles of Federal highway, consisting of a network of trunk line and secondary roads reaching into practically every county. It is still a long way off, but we are 5392 miles nearer than at the beginning of the year, according to the bureau.

Completed Federal aid roads now total 18,299 miles with 14,912 miles under construction and approximately 60 per cent complete. Including projects not yet under construction, Federal aid roads in all stages now total 40,338 miles.

There is no indication of any slackening of the greatly increased rate of progress which began with the season of 1921, as the states continue to pour in plans for new projects and place them under construction as rapidly as possible. Nearly $12,500,000 was obligated to new projects in June and July, and in the week ending August 5 reports were received of the letting of 68 new projects and announcements of 57 to be let.

At the present time the force of the bureau is taxed to the limit with the examination of new plans and projects, inspection of roads under construction and the planning of the Federal aid highway system which is being gotten into final shape.

—

A series of one-reel motion-picture films illustrating modern practice in the construction of the various types of highways has been prepared under the direction of the bureau and are available for free distribution by the motion-picture section of the Department of Agriculture. The films, consisting of one reel each, are as follows: "Modern Concrete Road Construction"; "Building Bituminous Roads"; "Mixed Asphalt Pavements"; "Brick from Clay to Pavement"; Granite Block Paving"; "High Roads and Sky Roads." In addition there will be completed in a short time "Building Forest Roads" and "Around the West by Forest Roads." A film on gravel-road construction is in course of preparation.

These films are intended for use in engineering colleges, road meetings, and other public gatherings. They may be obtained for use on specific dates without cost other than that of paying for transportation both ways. On account of the limited number of copies of each film it is best to make reservations some time in advance.

—

A minimum width of 18 feet for hard surface roads is recommended by the bureau. The maximum width of truck body generally permitted is 8 feet, and 5½ feet is the ordinary clearance width of passenger cars. At an average speed of 30 miles an hour it is unreasonable to expect the driver of a car to drive with the wheels closer than 1½ feet to the edge of the pavement, says the bureau. For trucks at an average speed of 15 miles an hour, this distance should not be less than 1¾ feet on account of the width of the rear wheel. Three feet seems to be a minimum safe clearance between bodies. Inasmuch as a certain volume of truck traffic is to be expected on all main country roads, the minimum width of surface should be 18 feet to provide these clearances when a car meets a truck. Where the frequency with which trucks pass each other becomes a big factor, as in the neighborhood of large cities, the minimum width of pavement should be 20 feet to provide a clearance of 3½ feet and a safe distance of wheels from edge of pavement.

Darlington Expects to Be Out

It is known that N. D. Darlington, chairman of California's state highway commission, fully expects that when or if Friend Richardson is elected governor—regarded as certain—the three commissioners, as well as its engineer, Austin B. Fletcher, will be asked to resign. Undoubtedly the matter of their successors will be of sufficient competitive interest to cause many wires to be pulled "clean out of shape," and much type to be set.

Fear is expressed that Richardson's economy pledges may mean the next commission will operate chiefly with an axe.

Useful Illinois Road Testing

The Illinois department of highways, and highway engineers of the Bureau of Public Roads, have constructed a novel test road at Bates, Ill., 2 miles long and in 63 sections. The different sections show various kinds of construction, base and thickness A continual watch is kept for changes and effects of temperatures, loads and subgrade conditions According to a truck tire official of the Firestone Co., expert work of this kind will do more for progress in transportation than anything of the kind advanced for years.

Iowa Improves 416 Grade Crossings

Since one-third of Iowa's highway fatalities last year occurred at railroad crossings, the state highway commission has designated 416 grade crossings for improvement. Two hundred and ten of the danger spots have already been reconstructed. In 35 instances overpasses or underpasses have been built.

Of Course There Is No Trust

"It is a remarkable thing that if you buy cement everybody charges exactly the same, but, of course, there is no trust."—Brigadier General Harry Taylor, U. S. A., before house conferees on War Department appropriation bill.

Texas Leads in Federal Aid Roads

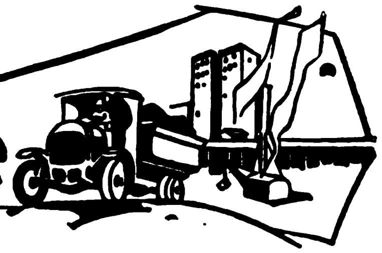
Texas is leading all other states in the construction of Federal aid highways. It now has 1382 miles of such roads under construction, and has completed 1116 miles.

New Gasoline Pepper at Hand

Thomas Midgeley, Jr., and T. A. Boyd, of the General Motors research laboratories at Dayton, O., told Pittsburgh engineers recently about the new "anti-knock" fuel compound (tellurium?) which has been developed by the laboratory staff after 6 years of experimental work. Within the next two or three years, Mr. Midgeley believes, gas engine design will have changed to get the benefit of the new discovery, and the compound will be placed on the market. Twice as many miles per gallon as are now possible is among the claims made for the new compound. The present yearly total of tellurium supply now is only 60 tons; but, odds fish! where there's a need there's a way!

When rubber and oil mix, rubber don't survive long.

The Car of Commerce



Save 20 Per Cent In Insurance Alone!

TWENTY per cent in insurance charges alone is one result already attained in New Jersey, by motor truck operators organizing to reduce their operating costs, says F. W. Fenn, secretary of the national motor truck committee of the National Automobile Chamber of Commerce. The statement is not accompanied by details, but appears to indicate organized demands.

Mr. Fenn, at a recent joint meeting of the Elmira, N. Y., chamber of commerce and traffic club, urged truck operators of Chemung County to pool their interests for the sake of group insurance and other benefits. Chambers of commerce, he said, can be of very great help in this work. The Akron and Syracuse chambers already have entered the field actively in behalf of their truck operators.

"Few people, perhaps, realize that trucks are among the chief factors in putting the railroads on their feet financially. I have this on good authority from one of the country's great railroad executives. There is a great significance, therefore, in the statement issued a short time ago by President Harding in which he said there could be no doubt as to the position of the good roads movement in the solution of our distribution problem."

Mr. Fenn then went on to show how trucks have reduced the delivery cost of milk in Milwaukee and other cities, of shoes in New England, and of cotton, corn and wheat in the South and West. For all these benefits, he said, the cost to each man, woman and child in this country last year was only 1 cent, after subtracting the money which the motor vehicle industry and owners paid toward the building of highways.

Referring to the present transportation crisis, Mr. Fenn expressed the opinion that adequate supplies of food for all major industrial centers could be supplied by the million trucks in this country today in the event of suspension of railroad service at any time. Figures were given to show that normally less than 3 per cent of the milk coming into Cincinnati arrives by rail. This was felt by the speaker to be a typical illustration of the widespread use to which trucks are being put in the haulage of perishable food supplies.

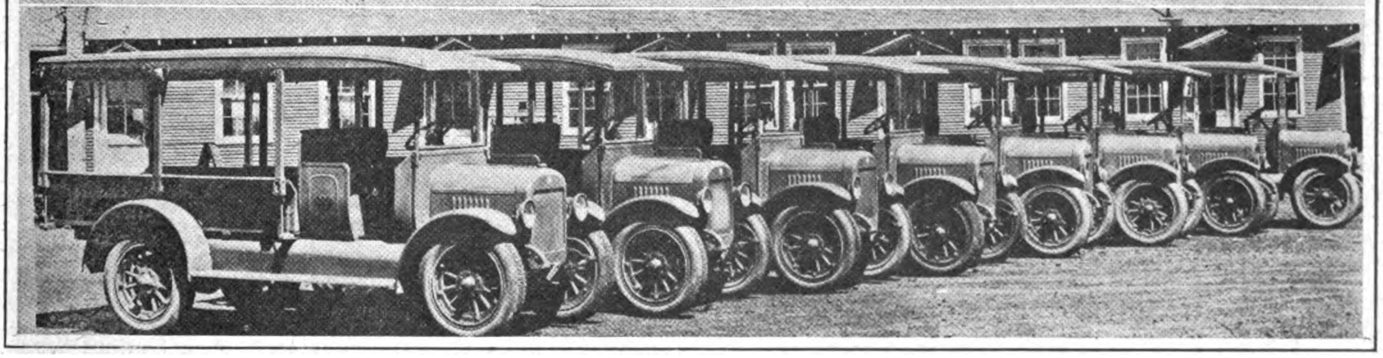
Federal Action Against Dragon Motors

Federal action was begun recently against Dragon Motors, Chicago, capitalized at $1,000,000. Charges were that its stock was sold by mail by Neideck Financial Corp., with offices in all principal cities, on the claim that Dragon Motors was manufacturing one automobile per day, that it had $592,772 assets, and orders for $600,000 worth of taxicabs, and the claim that its stock was being sold with the sanction of the Illinois securities commission. It was charged 300 persons had "invested" $100 to $5000 in the stock. Officers indicted were Herman Neidick, Joseph Stein, Hyman Edelman.

Canal Route Saves $40 Per Truck

A Motor West man who visited the Bethlehem plant in Allentown, Pa., recently, was told by President Hall that the company, reorganized a short time ago, is selling trucks on the Pacific Coast, and that on October 7 a shipment would leave Philadelphia via Panama Canal, and arrive at Los Angeles' harbor October 28—in less time than railroads could guarantee, and at $40 less expense per truck.

New bus lines are being opened in Berlin.



UNITED STATES GOVERNMENT BUYS TWO FLEETS OF RUGGLES TRUCKS TO USE IN NAVY YARD AT BROOKLYN, N. Y.

Two fleets of Ruggles trucks, made by Ruggles Motor Truck Co., Saginaw, Mich., have been bought by the Government for use at Brooklyn Navy Yard. The upper picture shows one fleet of six oil tank trucks; the lower one, eight canopy top express body trucks. The former have Ruggles all-weather cabs, the latter open cabs. Each of these 14 jobs is built on the Ruggles model 20 chassis—capacity 500 to 2500 pounds. This model combines ample power with speed and flexibility, features that were demanded by the Government officials who selected the trucks.

New Bethlehem Is Producing

Many Changes from Former Design and Units, and Line of Three Models Fits Many Truck Uses

THE new Bethlehem truck models show many refinements. While a number of the former Bethlehem constructional features are retained, there also are many refinements and change in design and in the units employed in the product.

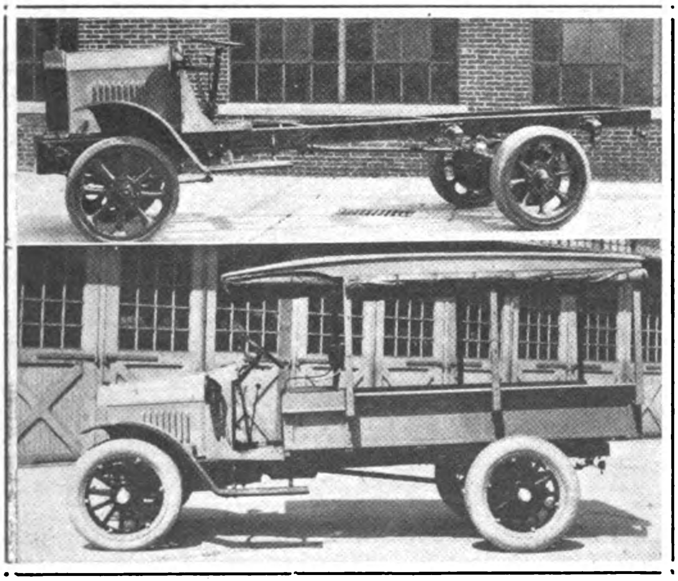
The new Bethlehem Motors Corp. of New York, now manufacturing the Bethlehem truck, was organized by Howard B. Hall, who is its president. He was vice president of the original Bethlehem Motors Corp., and purchased the assets of the old company at a sale of the properties and other assets on April 18 last. The new corporation already has launched production of the new series, and connections are being made to market the Bethlehem nationally and in foreign markets.

There are almost 10,000 Bethlehem trucks in service in this and other countries, and in 150 industries, and the new Bethlehem series is a refinement of this widely known, proven product.

One of the new models is known as the Airline, with a nominal capacity of 1 ton, and designed for speedy transportation. This model is offered at $1195 in the chassis form. The chassis weight is 2800 pounds, with a body allowance of 800 pounds, and is mounted on a 125 inch wheelbase chassis, with 56 inch tread, has a loading space back of the seat of 108 inches. The new Bethlehem Corp. will provide any style of body, mounted and painted ready for work, including all of the various styles especially required for the speed type of truck.

The new Fast Freight model, 2 ton capacity, has the Wisconsin Parts Co. double reduction type axle, running in oil, instead of the Russel axle, used formerly. Two leaves are added to the rear springs, and the new springs have 13 leaves of chrome vanadium steel, with bronze bushed eyes. This model is $1595 in chassis form.

The third model, the Heavy Duty, is a 3 ton truck, and has the Bethlehem motor in the largest size. (All Bethlehem power plants are of Bethlehem manufacture in the new corporation's own motor plant at Pottstown, Pa., and are identical in design and construction, differing only in size), Fuller 4 speed transmission, and the Wisconsin double reduction type of rear axle. This model has rear springs with 15 leaves, all of chrome vanadium steel, with bronze bushed eyes. Its price is $2195.



ABOVE, THE NEW BETHLEHEM "HEAVY DUTY" 3 TON TRUCK. BELOW, THE 1 TON "AIRLINE" MODEL.

The Fast Freight and Heavy Duty models have the new type of open driver's cab, though various closed and semi-closed types are supplied.

Electric starting and lighting is standard on all models. Bethlehem states that as it pioneered in this particular, the new series also pioneers in the use of pneumatic tires, the complete line of trucks having been so designed as to operate consistntly and economically at the higher speeds required on trucks with pneumatic equipment.

Photographs of two of the new models were received and appear on this page.

All models of Bethlehem trucks now in service will be serviced permanently from the Allentown factory service inventory, which is being augmented greatly to keep pace with production.

The new corporation is closing contracts on a perpetual basis, renewable automatically year after year, and is providing exceedingly attractive discounts at such list prices as the new series is offered.

In addition to the new practice in drawing perpetual contracts, the new corporation also is drawing special contracts with passenger car dealers to handle the 1 ton Airline model speed truck only, and with present light truck dealers to handle only the larger Bethlehem models, when desired.

Different than in the Old Days

Boards of education in 37 states are paying a total of more than $16,000,000 a year for the transportation of pupils to public schools. In some cases the scholar is is daily hauled a distance of ten to twenty miles and delivered to the parents every afternoon. The motor bus has become the most common agency for transportation, although the railway, the horse and the burro are in use in different sections. The pupil of today certainly has a great advantage over his forefathers. The pioneers had to shovel their way to the country schoolhouse and had to toil and make sacrifices for the purchase of the essential books. Now the student is scurried by automobile over a paved boulevard to a palatial educational plant and his school books are provided without cost. It is a fine thing if the young folks appreciate the advantages extended them.—Los Angeles Times.

Loss and Damage Cut 60 Per Cent

Railroad eyes are on motor transport, and vice versa. Perhaps the former are the more attentive. It would pay not to let it be so. Motor West receives much Southern Pacific publicity, and that part of it that refers to service reveals a high degree of co-operative efficiency among employes, and, increasingly, between the company and the public.

A Southern Pacific statement in August said co-operation between the public and the company resulted in reducing loss and damage to freight more than 60 per cent in the first half of the year, compared with the 1921 period. Similar reduction nationally amounted to 50 per cent.

Kept 25 Trucks Busy Six Weeks

Nelson Motor Co., Spokane, Republic truck distributor, is arranging to haul the apple crop of the Hunters Land Co., from Hunters to Springdale, Wash., in a few weeks. The Nelson Co. had the contract last year, and kept a fleet of 25 trucks on the job 6 weeks. This year it expects to use only 15 trucks, but will begin hauling as soon as the first apples are packed, instead of waiting until the packing houses are full, as was done last year, when 10,000 boxes had accumulated when hauling began.

United Motors Co., Grand Rapids, Mich., is stated to be planning immediate production of three models of motor trucks designed "to prove highly economical in operation."

DEPENDABLE MEC POWER

The ONE Engine That Answers In Actual PERFORMANCE This Prominent Engineer's Arguments

In the May, 1922, issue of Industrial Management there appeared an article entitled "Motor Truck Design From The Truck Buyer's Viewpoint", by Cornelius T. Meyers, M. E., one of the foremost consulting automotive engineers in the country. Mr. Meyers is an authority on all that pertains to automotive equipment. During the War he was in direct charge, under the War Department, of the design of Class "A" and "B" Liberty Trucks. He has been associated with some of the largest companies in the country. The quoted excerpts in this advertisement are taken from Mr. Meyers' article in Industrial Management. Although Mr. Meyers in his article deals with the motor truck, what he says about *engines is applicable to tractors, motor busses, taxicabs and passenger cars,* as the same fundamental principles apply in all cases.

Mr. Meyers Says—	*Midwest Gives—*
1 "The maintenance of a measurable film of clean oil on bearing surfaces will eliminate wear almost entirely, and the day is approaching when this will be a motor truck requisite, for it also reduces loss of power."	1 Midwest lubrication does actually "float" all bearings on an oil film—proved by the fact that for the past three years no bearings have been sold due to wear. For three years Midwest engines have been giving in actual performance the things that Mr. Meyers so ably discusses in his article.
2 "Engines of smaller bore than those now in general use can be made to give satisfactory performance if other details of the chassis design are properly co-ordinated, and if drivers are trained in their use. This is a very promising method of reducing weight and fuel consumption and is worth close study. * * *"	2 Midwest engines have never been sold on a bore and stroke basis. Because of the design, which actually eliminates much of the usual internal friction losses, we get *more power* to the "business end"—and with a smaller, more economical engine.
3 "Engines will go from 200 to 500 miles on a charge of oil."	3 Economy of lubricant is vital. Our records show in heavy motor bus service over 900 miles to the gallon of oil—in truck service more than 1,000 miles per gallon, while in taxicabs Midwest engines are giving over 2,000 miles per gallon according to operator's own figures.

Midwest engines deserve your immediate and careful investigation if you would sell a product that will completely meet present day conditions and demands in every field of transportation. Literature on request.

Please address Department 12

MIDWEST ENGINE CORPORATION Indianapolis, U. S. A.

MIDWEST

COMMERCIAL CAR POWER PLANTS

Indiana Highway Express

Fine Oil and Fuel Record of the New $1425 One-Tonner Due Partly to Idea in Springing

A NEW Indiana 1 ton speed truck, known as the Highway Express, was announced recently. The new model will embody several new features in speed truck construction.' It has been out in actual work and demonstration several months, and the factory is preparing to swing in quantity production.

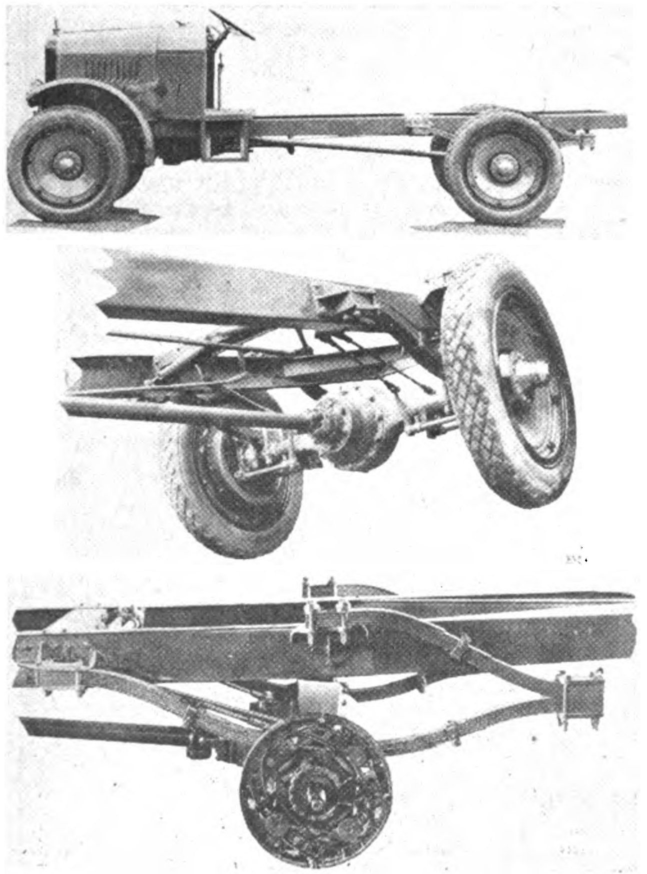
In actual tests the Highway Express has shown 700 to 800 miles per gallon of oil, 13.4 miles per gallon of gasoline, and an acceleration of 2 to 30 miles per hour in 25 seconds, with a total weight of 7000 pounds.

The 1 ton Indiana will sell at $1425. It has 132 inch wheelbase. The rear axle is a spiral bevel drive, semi-floating type. The engine is a special Waukesha, built under direct supervision of Indiana Truck Corp.—bore and stroke 3¾x5¼, three-bearing crankshaft, front bearings 2x2¼, center 2x2½, rear 2x3, connecting rod bearing 2x2¼, piston pin bearing 1x2.

The truck will be equipped with indestructible disc steel wheels and 34x5 inch pneumatic tires all around, with electric lights and starter, which will be standard equipment. It has a specially designed pressed steel frame. and some unique features in trussing and gusseting. The frame is of pressed steel construction, 5 7/16 inches deep, with 3¼ inch flange.

The spring construction is three-quarter elliptic type, front and rear. The principal feature of this is the arrangement of the leaves, and the elimination of all shackles and ground bolts, no lubrication necessary. This type of spring is said to be especially advantageous for a speed truck, as it gives added protection to the load, and the drive is through the springs, and the driving strains are carried by a number of main plates, instead of by one main plate as in the conventional type.

The new truck already has proved its ability at numerous kinds of work, and distributors are now taking orders. Shipments have been started.



"INDIANA HIGHWAY EXPRESS," NEW 1 TON SPEED TRUCK. "Indiana Highway Express" is the name of the new 1 ton speed truck announced by Indiana Truck Corp., Marion, Ind. In the picture, at top, is shown the chassis. Below that is a view of the axle and frame construction, and at bottom the spring construction.

Farmers Prefer Lighter Trucks

The great majority of American farmers prefer light truck for their delivery and hauling work, according to a compilation by the statistical department of Republic Truck Sales Corp., Alma, Mich.

Of the trucks in use on American farms today, 41 per cent are in the ¾-1 ton class, 18 per cent are 1½ ton, 28 per cent are 2 ton, 4 per cent are 3 ton and 9 per cent are miscellaneous sizes.

Of Republic truck sales for the past 3 years the percentage of sales of various models to farmers is approximately the same as the figures given.

250 Trucks for Indianapolis' Coal

Indianapolis is using 250 motor trucks for handling coal and ice, according to the Indiana Transfer and Warehousemen's Association. Among other important truck hauling facts in that city are:

For the distribution of milk, groceries, laundry, merchandise, etc., 500 trucks; delivery of sand, gravel and building material, 250; cartage delivery and distribution of vegetables and fruit products, 85; freight transfer, baggage and express, 550; manufacturing and building industry, 175; transfer of household goods, 112.

Yellow Cabs in London and Paris

The organization, in London and Paris, of taxicab companies to operate cabs manufactured by the Yellow Cab Mfg. Co., of Chicago, was announced by President John Hertz upon his return from a tour of England and the Continental. The London and Paris companies have placed orders for 25 cabs each to begin their service. Mr. Hertz said cab service in these two cities would be far superior to anything they now have, and be believes the vehicles will become so popular that the service will grow rapidly and provide a constant foreign market.

Truck Hire Cheaper than Coolie Labor

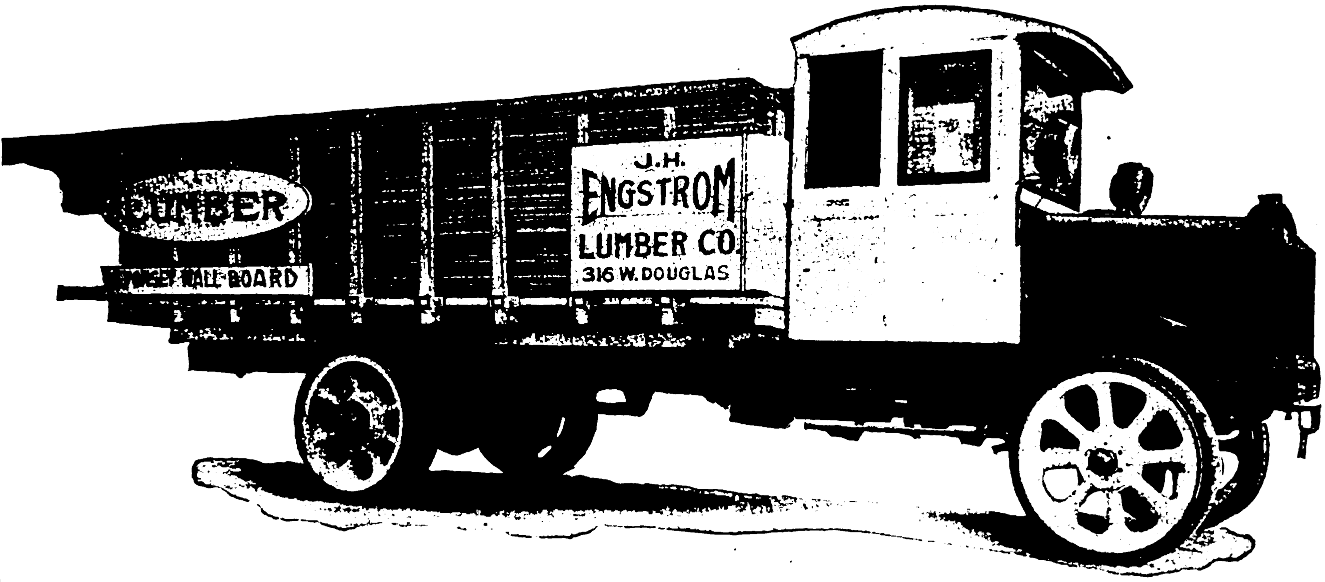
Small Chinese firms have found it cheaper and more efficient to hire a truck than to employ the necessary number of coolies, says Consul General Edwin S. Cunningham, Shanghai, in a report to the Department of Commerce. A Shanghai newspaper has estimated the expense of operating one truck for a day at about $31. To do the same work sixty coolies would be required, at a cost of from $36 to $48 for labor alone, exclusive of all other expenses.

Chicago Leads in Motorized Postal Equipment

Seven cities in the United States have equipment in their local postal service of more than 100 motor trucks. Chicago leads with 421. The others are: New York 318, Brooklyn (in Greater New York, but having a separate post office) 125, Boston 193, Philadelphia 193, Washington 111, St. Louis 108.

A survey by county agricultural agents reports a need for more motor trucks in 650 countries. Georgia reports the biggest demand, with 59 counties. Pennsylvania is next with 43.

Canada employs 15,000 skilled automobile mechanics.



BROCKWAY

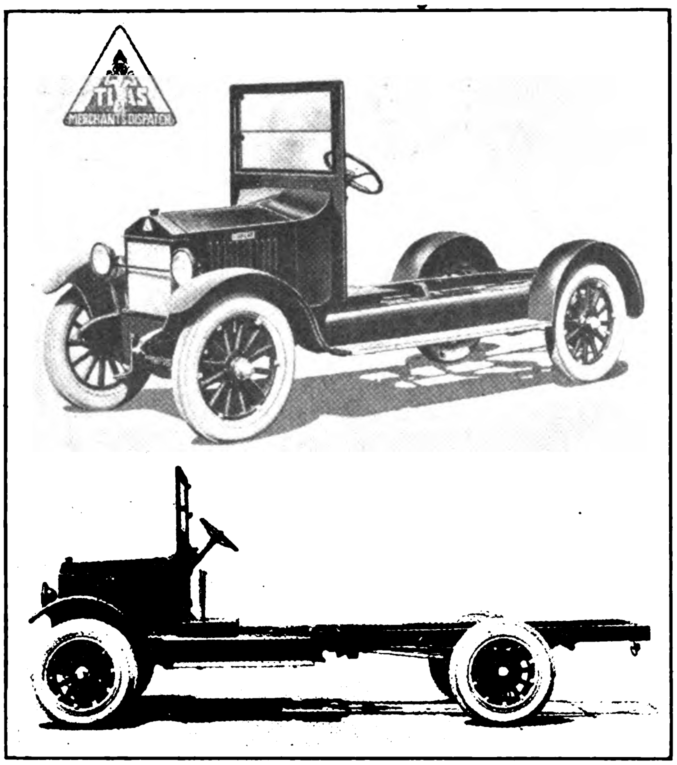
Have met with great success in using Smith Wheels as standard equipment on their 3½ and 5 ton models and as optional equipment on their trucks of higher capacity. They are strong for Smith Wheel quality which is distinctive and far in the lead.

Trucks to have great lasting qualities and secure the last mile of service that each tire should give require that they be mounted on Smith Cushion Wheels, both front and rear. They save in upkeep each year more than their cost.

Smith Wheels are made in three types;---rigid, pneumatic and cushion,---each a peer of its class.

Pacific Coast Representatives: A. H. Coates Co., 770 Mission St., San Francisco, California

SMITH WHEEL
SYRACUSE N.Y. U.S.A.



NEW ATLAS SPEED TRUCK MODELS ANNOUNCED.

As was told in Motor West, September 1, Industrial Motors Corp. so far is composed of Selden Truck Corp., Rochester, and Atlas Truck Corp., York, Pa., and Atlas speed trucks now are distributed by Selden, with H. T. Boulden, second vice president, as director of sales. The Atlas line consists of two speed truck models, No. 22 and 44. They are pictured in this issue. Model 22, called Merchants' Dispatch, 130 inch wheelbase, is rated at 1 ton. Model 44, 146 inch wheelbase, is 1½-2 ton. Both models have the Atlas-Buda WTU engine, bore and stroke 3¼x5⅛, and worm drive axles of Atlas manufacture. Both have pneumatic cord tires, solid tires positively not being supplied.

Brisbane Gives a Tip to Pennsy

The Pennsylvania Railroad orders 115 locomotives of "heaviest type." What railroads need and must have, if they expect to compete with flying machines, motor trucks and passenger automobiles, is some equipment of the **lightest type.** A system that uses 100 tons of train and locomotive to carry 10 tons of human freight will not long compete with modern methods, says Arthur Brisbane in the Hearst papers.

Transport Installs Fire Protection

Increasing demands on production have made Transport Truck Co., Mt. Pleasant, Mich., provide in every practical way against interruption. One of the most recent steps is the installation of the Grinnell sprinkling system for fire protection. The entire Transport property is protected by a system of pipes with lead sprinkler heads, which melt at 155 degrees and turn loose streams of water capable of checking a very severe fire. This system is provided with automatic alarms. As the sprinkler head blows off a gong starts ringing and can be heard a considerable distance, thus giving immediate warning of fire.

There are two sources of water supply. The primary source is a 50,000 gallon tank on a 75 foot tower, the secondary supply a pump at the river about 200 feet from the factory, which will deliver 1000 gallons per minute against 100 pounds pressure.

On the whole this is a most effective fire fighting equipment, and its installation in the Transport factory greatly reduces the risk of serious damage from fire and curtailment of production as a probable result.

Some Don'ts for Truck Drivers

To insure better care of them by drivers, one company operating a fleet of Republic trucks keeps the following posted in a conspicuous place on the loading platform:

Don't try racing with a touring car; your truck was built for strength, not for speed.

Wash your truck frequently; a dirty car can spoil a lot of our advertising.

Street car tracks are nice on springs, but hard on tires—and steel costs less than rubber.

Don't neglect a loose part, even though it seems to operate more freely that way.

Don't forget to watch the other fellow ahead; a slow stop on your part nearly always costs you a punctured radiator.

Use your brakes when getting "spotted"; platforms were built to load from, not as bumping posts.

Don't drive too close to the curb; edge-trimming is a fine institution for pie crusts, but too expensive for truck tires.

The steering wheel is vastlv important, but it is well also to give the grease cups an occasional turn.

Don't slide the rear wheels when stopping; rubber pavement polishers are too much of a luxury.

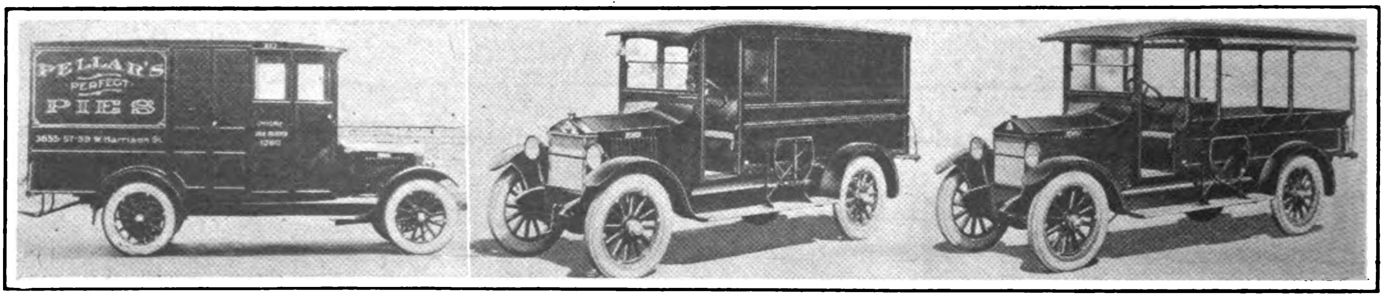
Automobiles Saving Rural Schools

Eighteen thousand rural schools are supplying transportation for pupils. By this the consolidated rural school is going forward at the rate of about 1000 per year. There are still 180,000 one-room schools which should be consolidated. It means a larger and better equipped school house. In the one-room rural school one teacher teaches all grades, from the kindergarten to the eighth grade, while in the consolidated school each teacher instructs but two or three grades. This means fewer and more highly qualified teachers and better teaching.

Biggest Automobile User in Georgia

Georgia Railway and Power Co., operating street car lines, owns 106 cars and motor trucks. This is one of the largest fleets of motor vehicles in the state. The president of the company says: "The time will come when we will be using automobiles as public transportation vehicles, in territory where the business would not justify building rail lines."

One in each four farms in Ontario, Can., has a car.



THREE EXAMPLES OF BODY TYPES ON ATLAS TRUCK CHASSIS MODELS 22 AND 44.

Tractor Department

Facts Affecting Tractor Interests

LATE in September, newspapers contained a large advertisement, signed by a group of nationally known banking houses, offering a new issue of $75,000,000 10-20 year Federal Land Bank 4½ per cent bonds, in denominations ranging from $10,000 down to $40. Being exempt from Federal, state, municipal and local taxation, they are equivalent to bonds yielding a noticeably larger interest. They are safe—the banks are a part of the banking system of the United States. They are acceptable by the Treasury as security for Government deposits in banks. The 12 Federal Land Banks have been built up in 4½ years of active operation, and on August 31, 1922, their capital was $33,506,085; reserve, $2,532,500; surplus and undivided profits, $3,480,133; total assets, $641,083,224. All 12 are on a dividend paying basis and every bank shows a surplus from its operations. The Government owns more than $4,200,000 of their capital stock, and the Treasury bought more than $136,000,000 worth of their bonds, and holds these. The banks are under the control and direction of the Federal Farm Loan Bureau, created when the Federal Farm Loan System law was passed 5 years ago, and made a part of the Treasury Department.

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Practically all that information, indicating that the bonds are virtually as good as gold in any financial transaction, plus the statement that they are offered at the Farm Loan Bureau's request, is contained in the bankers' advertisement. That's that.

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Now, if you have it, look up the article, "Farm Loan System Perverted," on page 46 of Motor West, August 1 issue. It tells of the suit of the Brentwood, Calif., unit of the new National Union Farm Loan Association, to test the constitutionality of the joker in the Federal Farm Loan System law, by which permanent organization of the 12 farm land banks, **with farmer representation** in their management, has been delayed during the 5 years and probably will be for 16 years more if the situation is not changed. The suit is an effort to compel organization of the Berkeley Land Bank in accordance with the law, which in this and all other cases is prevented by the joker in the law, which provides that as long as the Treasury Department owns any of the bonds, control and direction of the banks shall remain vested in the bureau, the personnel of which was described in the Motor West article referred to. All of the 12 banks qualified for the right of farmers in various regions to name six of the nine members of the board of each bank, and farmers have invested more than $30,000,000 in the stocks of the banks; yet, not only are they prevented from becoming directors of the banks in their own regions—as was the intent of the law—but there is not even one stockholder of any kind on any of the bank boards.

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The purpose of the law was to give farmers, like manufacturers, long-time investment opportunities, and to let them control the banks in their regions. It was the intent that bands like those now being offered be offered, not as they are being offered, through a concentrated Eastern banking coterie which, of course, is paid handsomely, but by the regional banks, thus saving the cost of the concentrated method and, far more important, encouraging investment in those regions and **keeping the money there**, to work for the people in the regions instead of working for the highly concentrated Eastern groups of bankers. That the plan stated in the law will be evaded by the gentlemen who compose the "temporary" bureau in Washington, D. C., as long as they can see to it that the Treasury Department continue to own the banks' bonds, during the next 16 years, appears obvious. That if the law were not thus evaded, and the money invested in the bonds were provided mostly in the various regions, and kept there to develop those regions, would benefit tractor interests, also is obvious.

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To help feed New York, get California agriculturists to use more tractors and to raise more. A New York authority, after a trip through the West, said: "They all understood how good a customer the New York port district is, though our friends in California were a bit startled to learn that within this district we consume each year 547,276 pounds of California cheese, 4087 carloads of California citrus fruit (34 per cent of all the total), 164 carloads of California onions, 119 carloads of California tomatoes, 625 carloads of California lettuce, 228 carloads of California celery, 5215 carloads of California grapes (90 per cent of total), 2216 carloads of California cantaloupes (56 per cent of the total), 638 carloads of pears (38 per cent of the total), 305,889 cases (30 dozen to a case) of California eggs, or 60 per cent of the total consumption."

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Weather conditions up to September 15 remained favorable for the agricultural crops of the Twelfth Federal Reserve District, and the harvest is expected to yield, in most cases, normal or larger than normal quantities. Forecasts of the 1922 yield of wheat remain unchanged at 98,000,000 bushels, 24,000,000 bushels less than in 1921, but slightly exceeding the 5 year average. Movement of this season's crop to market up to September 15 was unusually slow. Flour mills are now grinding new crop wheat and in August operated at 47.2 per cent of capacity, compared with 28.7 per cent in July, 1922, and 43 per cent in August, 1921. The car lot movement of fruit from California to September 1, 1922, was larger than last year to the same date, but prices have averaged lower than in 1921. Refrigerator car shortage is hindering shipment of the large grape and other fruit crops. On the whole, the situation might be better but might be very much worse.

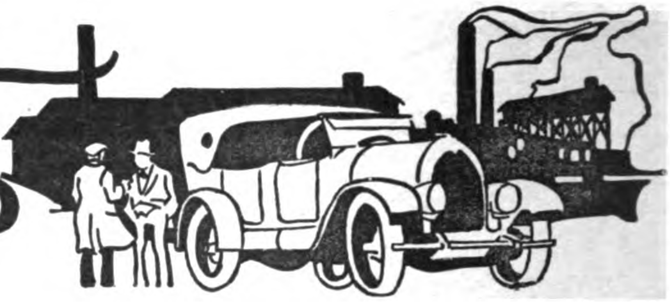
Stone Leaves Cletrac for Hoyt

Earl B. Stone joined the staff of Hoyt's Service, Inc., of New York—the service is "planned advertising"—at Cleveland, September 1. Mr. Stone has had a very extensive sales and advertising experience for 9 years, and during the last 3 years he was with Cleveland Tractor Co., manufacturer of the Cletrac, where he was a road salesman, assistant advertising manager, district sales manager and advertising manager.

New Factory for Kroyer Tractor

Kroyer Motors Co., San Pedro, Calif., which moved its plant from Stockton last winter, is seeking a site for a permanent factory to manufacture Kroyer Wizard tractors. It is now temporarily located in a large ship-building yard. The new plant will have 5 stories, cost $1,000,000 and employ 500 persons.

Trade Briefs & Factory Gossip



NOTES BY "ON-THE-SPOT"

(F. Ed Spooner, Detroit)

Despite the rail and coal situation, automotive plans for 1923 expansion are under way in many quarters. Most of these have to do with the closed car, the demand for which has shown surprising increases. Body manufacturers are making every endeavor to fit themselves to meet this. Indications are that demand next year will range from 50 to 60 per cent for closed cars. City demands will reach 60 to 75 per cent, it is now predicted. Detroit has been forced to go away from home for closed bodies, and these are being shipped in. Detroit has many body makers, but they have been totally unable to keep pace with the situation. Closed bodies take more room in manufacture. Body plants are to be found on all sides in Detroit, and spare buildings are snapped up quickly and added to the great groups of buildings now occupied by well known body building companies.

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The increasing demand for closed bodies has been looked for by wise men, because 99 per cent of car owners do not let their tops down, and closed cars, second hand, bring a price much higher in proportion to first cost than do touring cars with cloth top or imitation leather top.

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From one to 12 extras are being added to cars nowadays, and equipment makers are much pleased with the outlook for the coming year. Added equipment is used as a selling point. Added finish is another feature of new models, while color combinations are coming more and more into vogue.

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It is passing strange, but in this day of almost universal motoring there are men who envy the motor car maker and damn him with faint praise because of past successes and certain success to follow. One of these gentlemen said recently (it was during the days of real dyed-in-the-wool pessimism):

'I'll tell you what is the matter with the automobile game. The makers have gone crazy. They are and have been making far too many cars. There is not a sale for the possible product of the American factories. Even were the whole world buying liberally, that would not fill the plants of America to capacity production." He said more, and today, like the manufacturers themselves, is stumped to explain the production of 281,000 cars in June, and the great sale of cars in July, when the slump was expected. He is stumped to explain this in the face of only limited buying by farmers, who use so large a percentage of all the cars.

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Like so many others, the skeptic forgot to consider the necessary replacement business, a delayed replacement of two years for many. He also forgot the growing babies, who in the last two years have reached manhood, married but been unable or unwilling to buy until times improved. With marked improvement in the times the "babies" became buyers, while their elders decided that the old car must go.

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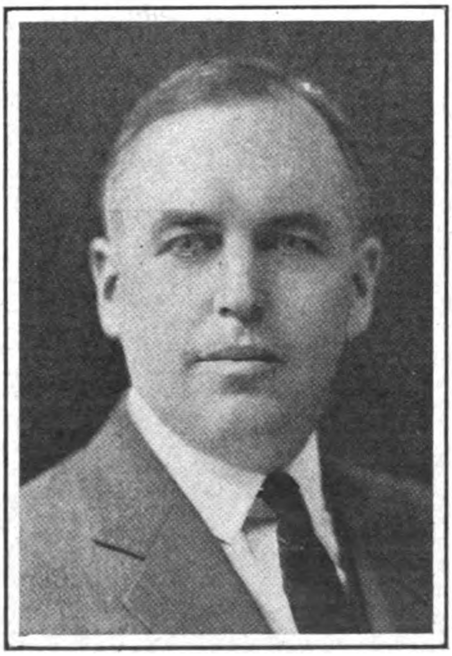
Standing on the main streets of Chicago, Denver, Colorado Springs, Cleveland, Toledo, Indianapolis, New York, Philadelphia and Newark, during recent weeks, the writer watched the cars go by with interest. The number of new cars passing, and the number at the curbs, showed plainly why this might well be a 2,000,000 car year. The demand could come almost completely from the larger cities even if the farmers do not buy liberally. Saturation? No.



G. L. GILLAM.

Mr. Gillam, now sales manager of Service Motor Truck Co., Wabash, Ind., formerly occupied a similar position in the truck division of International Harvester Co.

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True that much of the greatly increased business of this year will not be repeated next year, when the replacement business will have come back to normal; but also true that this year's business has come from large cities; and this leads to the proposition that 1923 will be a bumper year, too. There will then be added to the ordinary amount of replacement business much business from new buyers, and a vast volume from the farmers, and replacements and purchases by non-owners of the past. The business in the latter field is just about going to fill in the balance of 1922 and bring the grand total production to the 2,000,000 mark, in the opinion of the writer.

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Henry Ford became imbued with the cycle car "bug" at the time when, before the war, cycle cars promised to be transportation factors. The Detroit Automobile Dealers' Association held its annual show in the Ford retail store, and a feature was a cycle car row—and that is where the crowd was. Mr. Ford took very unusual interest in that display of little cars. He stood afternoon and night at the head of the aisle and watched the crowd. He saw real interest.

For some time it has been known that he began experimenting at that time; and reports have been current that he plans to put a car on the market much in line with the light ones of cycle car days, with 4 cylinder motor and shaft drive. The motor of, about 125 cubic inches displacement, is much smaller than the Ford motor, which runs about 161 cubic inches. Now it is reported in Detroit that Ford plans marketing a car which may revolutionize things; a car of entirely new type and of weight to compete with the motorcycle. A Ford official refused to confirm or deny the report, but he did admit that the experiments, should they come to a head, will mark a radical departure in motor manufacturing. For some time it has been rumored that Ford was working on a car to sell for $300 or under that figure; a car designed to be as serviceable as the present Ford, but much cheaper to make and lower-priced to the buyer. The present reply to this rumor seems to be the one-man-top flivver.

Fine Quaker City Rubber Co. Move.

C. A. Daniels, president of Quaker City Rubber Co., Philadelphia, one of the oldest and best rubber manufacturers, announces J. M. Dixon and Norman E. Oliver as directors.

Mr. Dixon is president of Tobacco Products Corp. and director of many other large corporations.

Mr. Oliver was also elected vice president. This is an important move, as Mr. Oliver has a fine record of 25 years of achievement in practically every phase of rubber manufacturing and distribution. He is a pioneer, having been a director of Diamond Rubber Co. and later general manager of B. F. Goodrich Rubber Co. of New York, where he had charge of practically all of the Eastern states.

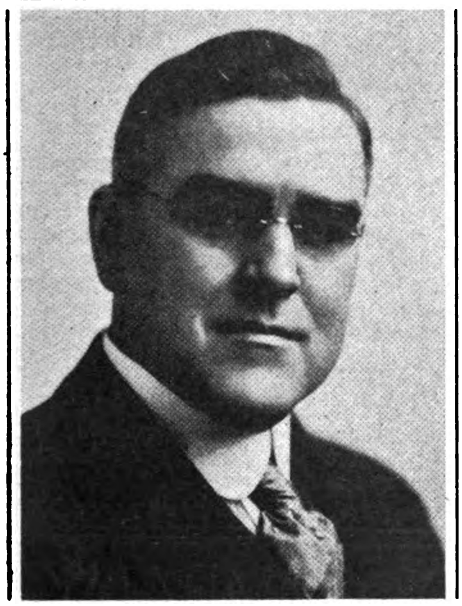
Though old in experience, Mr. Oliver is still young. In growing up with the tire industry he has not only watched its phenomenal development but has had that rare business quality that enables him to sense the future.

Mr. Oliver contemplates a substantial financial interest in the Quaker City Rubber Co. It was organized by Mr. Daniels in 1885, with a nominal capital, but through accumulated earnings and superior products now is worth many millions.

Mr. Daniels, in associating himself with Mr. Dixon and Mr. Oliver, has in contemplation very extensive plans for developing new outlets for Quaker City Rubber Co. products and largely increasing its volume of operation.

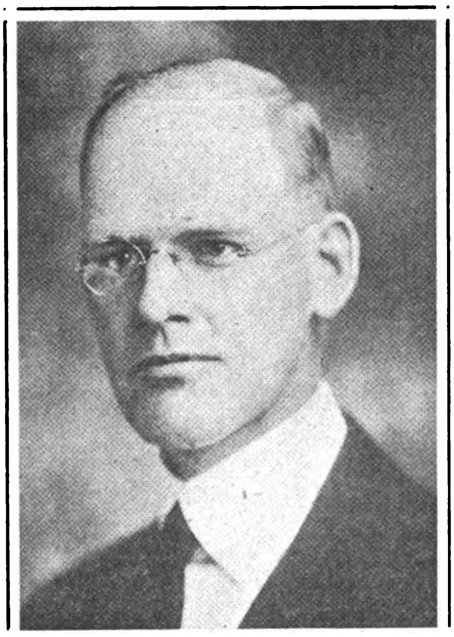
New Schrader Sales Plan.

Because of seeming conflict with the terms of the Sherman anti-trust law, A. Schrader's Son, Inc., after consultation with Federal officials, put in effect, September 1, a plan whereby its products will be sold direct to tire makers and jobbers, or through Schrader consignees, at the same prices as made by the company. This replaces selling under license agreement and certain price restrictions. A Government suit was filed after the new plan had been arranged. This was regarded as friendly and the decree was consented to by the Schrader Co.



W. C. ALLEN.

Mr. Allen, announced as sales supervisor of Black & Decker Mfg. Co., Baltimore, well known for its portable electric drills, etc., was manager of the Chicago branch the past year. Formerly he was sales manager of Electric Appliance Co., Chicago. His successor as head of the Chicago branch is R. S. Mitten.



A. F. BASSETT.

Mr. Bassett is announced as assistant sales manager of the Motor Bearings Divisions, Hyatt Roller Bearing Co., Detroit, by H. A. Brown, Jr., manager. Mr. Bassett, a graduate of Yale-Sheffield school, brings to this division several years of combined sales and engineering experience with other divisions of the company. Previous to his new appointment he was sales engineer for the Detroit territory. His broad, practical experience in both engineering and selling, plus his knowledge of the product, fit him admirably for his new work.

* * *

Hayes Wheel Co. Prospers.

Hayes Wheel Co. gross profits, the first 7 months of 1922, were $967,029 and net $640,712, compared with $700,319 gross and $309,395 net for the same period last year. The new net equals $5.40 per annum on each of the 200,000 outstanding shares of common, compared with $2.44 for the similar 1921 period. Net working capital, July 31, was $2,625,538. The plant is going at capacity, with no indication of letup.

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Steel Workers' Wages Raised.

News that workers in United States Steel Corp. manufacturing plants had a wage raise of about 20 per cent on September 1 does not—necessarily—indicate a raise in prices of steel products.

* * *

Packard's New Bonus Plan.

Packard Motor Car Co. has announced a new bonus plan. A standard of efficiency has been set for each department, and when, through the efforts of the workmen the department's efficiency exceeds the standard, each employe of that section will receive added pay. One of the advantages of the plan is the elimination of the bulk of record keeping that is necessary under the piecework plan.

* * *

Reo Dividend Declared.

The regular quarterly 1½ per cent dividend, plus the usual extra 1 per cent on common, both payable October 2, was declared recently by Reo Motor Car Co., Lansing. It was the first dividend on the new capitalization and indicated intention to continue the old rate of 10 per cent per annum. The plant is under full production, with a huge coal supply insuring continuance.

* * *

GMC Copper Cooled Car Gossip.

Some time ago the prospect of a General Motors air cooled car, with copper fins instead of the iron ones used customarily, was mentioned. A model has been under test at the Dayton research laboratory some time. Recent Detroit gossip is that it is certain the car will be produced in the Chevrolet factory.

* * *

Dodge Estate Worth Huge Sum.

The probate court inventory filed recently in Detroit put the value of the late John F. Dodge's estate at $36,892,588.41.

* * *

Goodrich Tire Prediction.

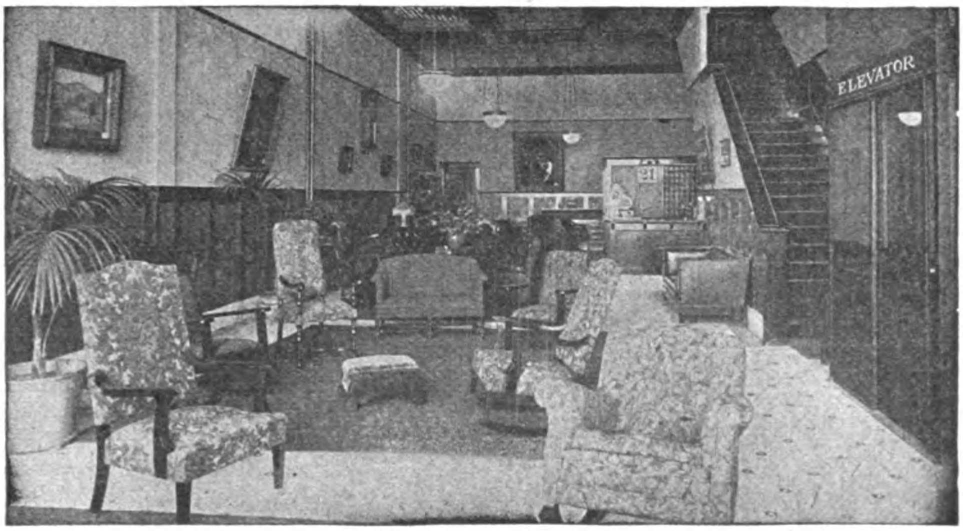
Recently Goodrich officials were quoted as predicting that demand for tires will continue well into the winter.

* * *

Continuous operation of the Cadillac plant throughout the winter is assured by President H. H. Rice.

NORMAN E. OLIVER.

Mr. Oliver, young but a tire pioneer, has become a director and vice president of Quaker City Rubber Co. More details are told in this issue.



You'll Feel at Home at the Botsford

When Motor West selected this comfortable, home like, and fire-proof hotel as San Diego headquarters for all who read and travel, the three chief demands of the well-read traveler were considered.

LOCATION - SERVICE ATMOSPHERE

Manager Floyd B. Kirk takes especial pride in the central location of his house—just north of Broadway on 6th street—the courtesy extended to guests by all employes, the up-to-the-minute accommodations he has to offer, and the cozy lure of hominess that pervades his entire establishment.
Before you start, be sure of Special Rates and Reservations by wiring—

HOTEL BOTSFORD
SAN DIEGO, CAL.

Ver Linden and New Car Mentioned.

Reports connect the name of Edward VerLinden with the production of a new car. Mr. VerLinden resigned as president of Durant Motor Co. of Michigan and was succeeded by Carroll Downes. It is understood the legal difficulties in which he was involved with General Motors Corp. following his resignation from it previous to his joining Durant have been settled.

* * *

Battery Veteran Promoted.

John A. White, well known as a pioneer in the battery industry, has been appointed a vice president of U. S. Light & Heat Corp. He has been continuously in the business 23 years, joining the makers of USL batteries when National Battery Co. was obsorbed. More recently he has been sales manager at the Niagara Falls plant, where he will continue to have his office.

* * *

Autocar Exhibit in Brazil's Show.

W. Y. W. Rabb has gone to Rio de Janeiro, Brazil, where he will reside as general agent for South America for the Autocar Co., Ardmore, Pa., during the period of the Brazilian centennial exposition. Mr. Rabb has arranged a complete exhibit.

* * *

Heads GMC's Detroit Law Office.

Earl W. Webb has been placed in charge of the Detroit office of the legal department of General Motors Corp., succeeding James McEvoy, now in charge of the patent section.

* * *

Akers Leaves Republic.

F. H. Akers has resigned as sales manager of Republic Truck Sales Corp,. of Alma, Mich., and was to announce his new interests after October 1.

AC
The Standard Spark Plug of the World

Every motorist is a prospect for the sale of AC Spark Plugs because most cars are factory-equipped with AC's and there are specially designed AC's for all other engines, too.

A C Spark Plug Company
FLINT, Michigan

Olds Gives Lansing Power Site.

In order to facilitate the growth of the city of Lansing, Mich., Olds Motor Works has donated 9 acres in the heart of the most desirable section, valued at more than $50,000, for a city power plant.

The city officials sought for months to obtain a desirable site, concluded the land owned by the Olds Co. was by far the best, and offered to buy it but were told it would be given them.

* * *

Hyman Is Stutz Ad. Director.

H. R. Hyman, seven years in charge of the merchandising department of Cole Motor Car Co., has been made director of advertising for Stutz Motor Car Co. of America, Indianapolis, where he will be directly associated with Fred Wilson, sales manager of the company.

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Maxwell Engineering News.

L. C. Freeman, executive engineer of the Maxwell Motor Corp., announces E. A. Nelson as Chief engieer, with H. E. Maynard as assistant chief engineer. John Squires has been made assistant to the chief engineer, in charge of the administrative work of the department.

* * *

Florida Ford Plant.

It is said Ford expects to have an assembling plant at Jacksonville, Fla., to handle the business of Southern Georgia and Florida.

(More factory items on page 63)

LOS ANGELES WAREHOUSE COMPANY
MAKES A SPECIALTY OF AUTOMOBILE STORAGE

CARS UNLOADED
DIRECTLY INTO WAREHOUSE

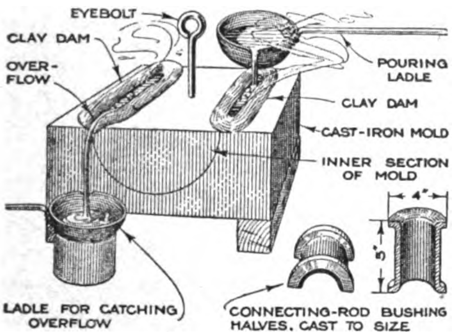
316 COMMERCIAL STREET
14727, Main 4787

Shop Practice Hints

Motor West has access to a very complete collection of data, by means of which practically any question pertaining to automotive mechanical matters can be answered.

POURING BABBITT RIGHT.

If certain precautions are used almost anyone can pour babbitt bearings full and up to size, and with a finish as good as die castings, by using metal molds. The mold should have two openings, as far away from each other as possible. One opening is the pouring gate and should be surrounded with a clay dam, about ½ inch deep. The other opening is for overflow, and a similar clay dam should be built around it, and a small groove pressed into the clay on one side to allow any overflow metal to run off into a ladle or pot placed underneath, as shown in the illustration. The idea back of this is that the metal, which should be just hot enough to char a white pine stick, heats up the mold to almost the temperature of the metal itself, and all grease and dirt, which would produce gas bubbles and cause trouble, are washed away. It is essential to have the bottom of the groove in the dam around the overflow opening about ⅛ inch higher than the top of the mold. to allow for contraction of the metal when it cools. When the mold is full, stop pouring but keep the ladle handy until it is seen whether the metal shrinks below the top of the mold. If this happens, pour in a little more metal.



A BABBITT METAL MOLD.

CURE FOR WHEEL SQUEAK.

Loose spokes and felloes in wooden automobile wheels cause squeaks. Loose wheels of this kind can be tightened permanently without shrinking the tires. The entire wheel should be soaked in water until the wood swells and the spokes and rims become tight. Then immerse the wheel in boiling linseed oil. The water will be driven out and the oil will take its place. When the wheel dries the oil will remain in the wood. About ½ to 1 gallon of oil is needed.

NOISY VALVE TAPPETS.

Automobiles that are not provided with push-rod adjusting nuts can be silenced by drilling a hole in the top of the rod, about ⅜ inch in diameter and ¼ inch deep, and filling this cavity with solder or melted babbitt. If the filling should pound down after long use, the valve can be lifted easily and a drop of two of solder filled into the hole from a soldering iron. This method will silence practically all valve tappet noises.

CARELESS WASHING OF HANDS.

The practice of washing the hands in oil or grease, common among workmen in repair shops and garages, is responsible for many mysterious epidemics of boils, eczema and other skin diseases, according to the Department of Labor.

The grease or oils as they come from the manufacturer do not contain any bacteria, but become contaminated after being handled by employes having pus infections on their hands or arms.

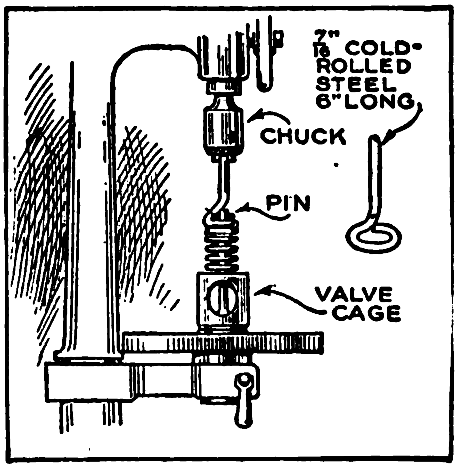
The use of gloves by workmen who handle grease is recommended, and frequent cleansing of the hands with warm water and good soap.

HOW PUNCH BEATS DRILL.

Sometimes a punch will be found more useful than a drill for making a large number of holes in thin sheet metal. If the punch is ground off at an angle of 1 degree it will be much more efficient. This makes it possible for one edge to bite into the metal before the other, and the shearing effect will make the punch work easier and quicker. A block of wood or lead should be placed under the work being punched.

VALVE CAGE SPRING REMOVER.

The illustration shows an easy way to remove springs from valve cages. Take a piece of 7/16 inch cold rolled steel and bend it as shown. Clamp the shank in the drill press chuck and place the ring over the disc on the end of the spring. Feed the chuck down and it will then be easy to remove the cotter pin.



TO REMOVE VALVE CAGE SPRING SIMPLY.

TO PREVENT RUST.

Metal parts beneath the hood and fenders are prevented from rusting by painting with a black enamel. Clean the parts well with a wire brush and apply the enamel with a stiff varnish brush. Parts that may be enameled to advantage include steel fan blades, pulley arms, brackets and elbows, nuts that are not often disturbed, exposed pieces of shafting, pinion wheel centers, operating rods, etc. Even a cylinder casting may be so treated, as a good enamel will stand heat without blistering.

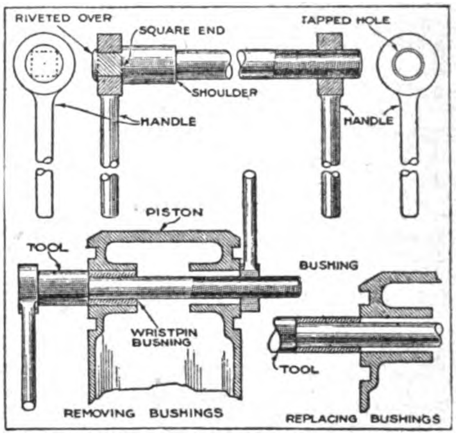
HOSE SUGGESTION.

Urge patrons to have all hose connections changed once a year. Hot water rots the rubber, loosens up the fabric which gets in the way of the water, and cuts down the efficiency of the cooling system.

WRISTPIN BUSHING TOOL.

A good tool for extracting or inserting wristpin bushings, and one which is made easily, is shown in the illustration. A piece of steel rod is turned to form a threaded shaft having a shoulder, as shown, and a square end for a handle, which is attached to the end of the tool by riveting the end after the handle has been put in place. Screw the threaded end of the tool into a threaded collar, which is then welded to a handle as shown.

In removing a bushing, the tool should be placed through the piston and the collar screwed up, which will force the bushing to the center of the piston and out of the boss. When inserting a bushing, it is slipped over the tool, and the end is then run through the piston. When the threaded collar is screwed up the new bushing will be forced into the boss until it clears the outside of the piston.



WRISTPIN BUSHING TOOL.

SOME DON'T KNOW.

The proper way to mount a rim is to tighten each lug a little at a time until all are snugly in place. Never force one lug to the fullest extent while the others are still loose.

Many garage owners paint the walls and floors of their pits white and find that it improves the effect of the electric light about 100 per cent.

Small emery wheels can be dressed easily by using an old glass cutter. The type of cutter that embodies a hard-steel wheel should be used.

Shop workers, in using glue, will find that a little powdered chalk added to it will make it stronger and more durable.

The leg of an old cook stove will make a good, cheap ladle for melting babbitt metal.

Motorists' Letter-Box

GOLDEN RULE IS BEST.

Editor Motor West: Where can I obtain a book giving rules of the road and showing rights of way?—J. K. B., Brigham, Utah.

About the only rule an automobile driver needs to follow in this respect is to "be a good sport." Let waiting pedestrians and drivers pass a busy intersection. They may be in as much of a hurry as you are. Don't do anything to annoy another driver, that you would not like to have done to you. In other words, the Golden Rule works fine on the road.

CONTINUOUS OIL FEED.

Editor Motor West: Can you explain to me how continuous forced lubrication is obtained, that is in cars where the oil pressure seems to increase with the increase in engine speed?—V. G. K., Eureka, Utah.

The oil pressure not only seems to increase with changes in engine speed, it actually does increase in most cases. The diagram shows how this is accomplished in one engine. As the throttle is opened, the cam, shown in the diagram, revolves, increasing the oil pressure. This gives a constant pressure of oil to the bearings, and the sleeves and pistons are lubricated by a forced spray, not by splash. When the engine speed is reduced the oil pressure is reduced accordingly.

WHY THE CAR ZIGZAGS.

Editor Motor West: My car zigzags quite a bit and will not keep to the road unless I force myself to hold the wheel continuously to one side of the road. I frequently take long drives, and this constant strain is pretty hard on me. I have examined the steering knuckles and the rest of the steering apparatus, and this seems to be all right. Can you tell me what the trouble is?—B. H. E., Seattle, Wash.

In many cases, when an automobile will not keep to the road it will be found that the radius rods are bent, thus allowing the axle to tip forward and throw the steering knuckles out of perpendicular. You may not have noticed this fault when you examined the car. If this should be found to be your trouble, clamp a large monkey wrench on the underside of the axle, allowing the handle to point ahead of the car. Raise the end of the handle by using your jack and thus bend the axle back into place. Each end is bent separately in the same manner, unless two jacks and two wrenches are available for use at the same time. Your trouble was probably caused by hitting a ditch or deep hole while driving fast.

SHOP CANDIDATE.

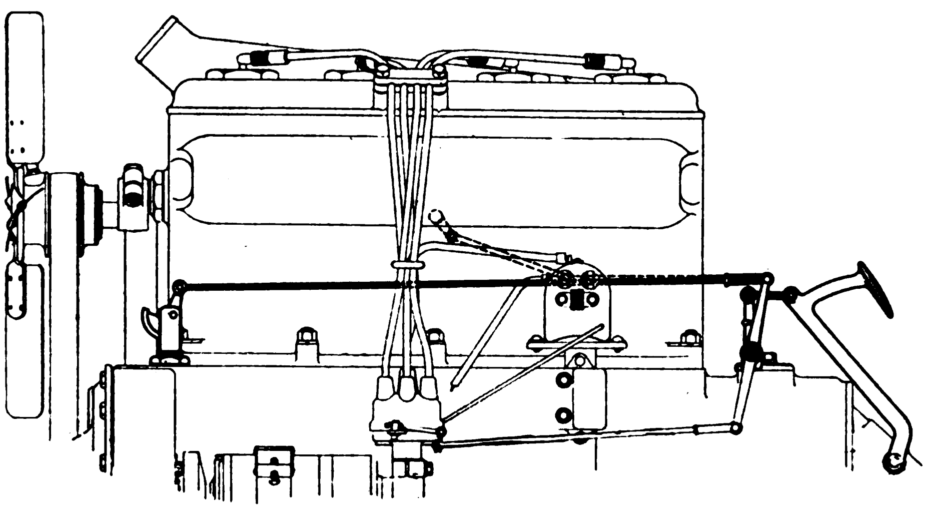
Editor Motor West: Will you tell me why I cannot shift gears in a 1915 Cadillac without making a very bad grinding sound? I run it at different speeds but it doesn't seem to help any. How much oil should I carry in the crankcase? The engine has just been rebored. What makes it, when idling, speed up suddenly and then die down, but not quit? Have had pipe lines and vacuum cleaned and carburetor overhauled, but this has not made any difference.—B. C. H., Sacramento, Calif.

Your bearing on the jack shaft in the transmission probably is badly worn, or your clutch is dragging and clutch brake worn. You should use 2 gallons of oil and keep oil at same level always. Faulty valves, poor ignition, or poor distribution and trouble in your carburetor will cause your engine to lope. Any good mechanic can remedy all these troubles.

WIDTH OF SPARK PLUG GAP.

Editor Motor West: How wide should the gap in a spark plug be? Should it be the same in a tractor engine as in an automobile engine? Should it be the same on different types of ignition systems?—N. A. E., Yuma, Ariz.

(1) The gap in a spark plug on an automobile or tractor engine is the same. (2) It does make a difference in the gap however, on different types of ignition systems. On battery type ignition systems the gap should be from 20 to 25/1000ths inch. On high tension magnetos the gap should be 16/1000ths inch.

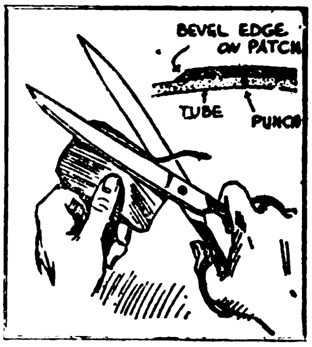


ILLUSTRATING HOW OIL PRESSURE IN ONE ENGINE INCREASES WITH THROTTLE OPENING. REGULATED BY ARM CONNECTING ACCELERATOR WITH CAM.

TO MAKE PATCHES STICK.

Editor Motor West: I have trouble making my tire patches stay on, especially when I make tire repairs on the road and I wonder if you can tell me whether the cement is at fault, or whether it is my workmanship?—A. P. S., Phoenix, Ariz.

In making tire repairs on the road—that is, when you put a patch on a tube—care should be taken to have both the patch and the tube around the puncture very clean. The running board can be used to good advantage as a work bench, and there is then no need of getting the tube in the dust. Either a sharp knife or a pair of scissors, if available, should be used to trim the patch down to a bevel edge all around. Apply your cement and then the patch, with the bevel side up, and clamp on if you have a clamp in your outfit. If you have none apply as much pressure as possible and let the patch dry a few moments. If care is used to keep all materials and the tube clean, you should have no trouble.



MAKES PATCH STICK.

LEAK IN WATER JACKET.

Editor Motor West: I have a very small crack in the water jacket on the front cylinder of my engine. If I have it welded it will be necessary to remove and disassemble the engine, which is quite an expense. Can I repair this by any other method?—T. L., Carson, Nev.

Assuming that the leak is very small, you can repair it by putting sal ammoniac in the water jacket. This will rust the inside of the jacket so much that it will close the crack and stop the leak. There is also an iron cement which is very good, and it can be applied from the outside. First clean the crack thoroughly and rub the cement into crack and allow to dry. This cement becomes nearly as hard as iron when it sets.

TAR ON FENDER.

Editor Motor West: How can one remove tar from a fender without injuring the finish? Ordinary washing has no effect on the tar.—H. E. V., Santa Barbara, Calif.

If your fender is varnished over a paint job you cannot remove the tar without injuring the finish. If the fender has baked enamel, try turpentine. That probably will dissolve the tar without affecting the finish.

Three-year grade crossing record, including 1920: Killed, 3636; hurt, 10,644. Getting worse every year.

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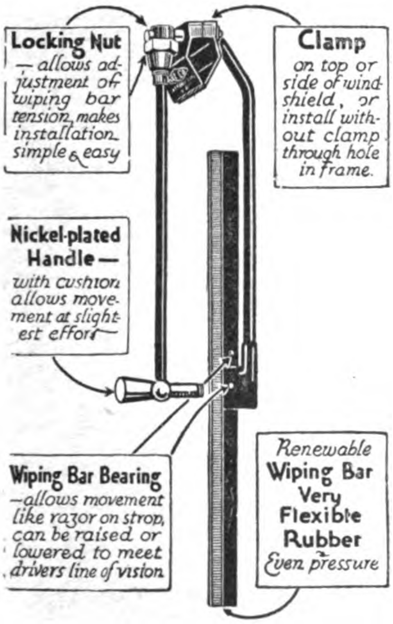
A cleaner that achieves immediate popularity with the motorist, backed by a system of sales cooperation that commends it to every jobber and dealer who is alert to quick and profitable turnover. Intensive advertising, free window and counter displays with other sales helps, and a discount rate that is more than attractive.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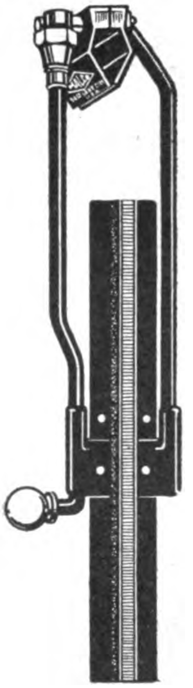

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THINK IT OVER!

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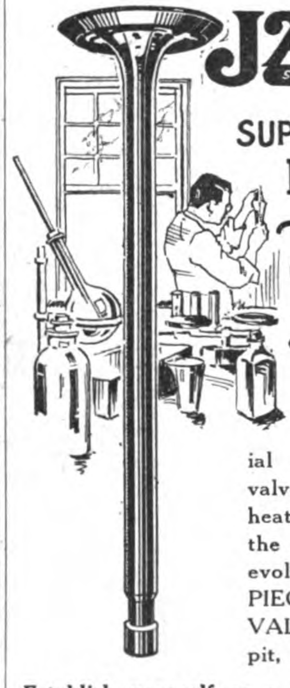

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Sales Department: Allied Industries, Inc.
San Francisco Seattle Los Angeles

New Things in the Accessories Field

MONOGRAM LENS.

Monogram Lens Corp., 277 American Circle Building, 1834 Broadway, New York, started business January 1, 1922. Within 8 months it was supplying Monogram lenses as standard equipment for 19 of the best known cars built in this country, representing practically the entire price range.

The lens inventor, S. F. Arbuckle, vice president and general manager of the company, is a leading highway lighting expert. The Monogram lens is scientifically designed to distribute the light of the headlights evenly, with a spread of 44 feet, beginning with 1650 candlepower at tips of beam spread and increasing in intensity toward the center until 80,000 apparent candlepower is obtained in the center or crown of the road.

MLC
MONOGRAM

THE MONOGRAM LENS.

Illumination of 3000 apparent candlepower 20 feet to right and left 100 feet ahead of the car is given by a pair of headlamps, Monogram-equipped, with 21 candlepower headlights. When focused properly and pointed according to state law requirements, they deliver three times the ordinary volume of light, it is stated by F. R. Leeds, president.

Patents have been applied for on both lens and design of equipment for mould manufacture. By the method of mould maintenance the manufacturer is able to guarantee that lenses sold to the public are optically equal to lenses submitted to state authorities for test and approval.

DELUXE VELVET CLUTCH.

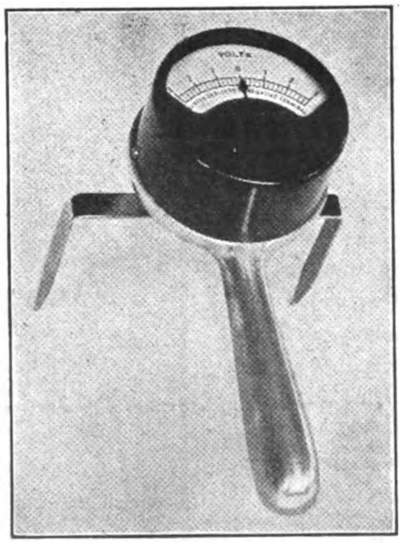
Clark-Turner Piston Co., Los Angeles, nationally well known as maker of DeLuxe pistons, has added the manufacture and marketing of the DeLuxe Velvet clutch control for Chevrolet cars. It eases and simplifies Chevrolet clutch action by introducing a new leverage ratio. The tension necessary on the clutch pedal is reduced 8 times, it is claimed. Thus the Velvet clutch control provides a free, smooth, perfectly balanced back-and-forth clutch action, doing away with "jack-rabbit" car motion through traffic where constant clutch manipulation is necessary. It is sturdy and built to outlive the car, is simple to install (with no holes to bore) in 10 minutes, and is sold on 10 day trial. Price $6.50 installed.

RAMSDELL HAND VISE LATHE.

Campbell Mfg. Co., Slater Building, Worcester, Mass., has put forth the Ramsdell's hand vise lathe for garages, repairshops, service stations, car owners —in fact for all who have to do with repairing of machinery. It is claimed this device enables anyone to make milled studs, set screws, cap screws, pins, and many other special screws and studs used in automotive machinery, without need for engine lathe or automatic screw machine. Also, with it wire springs can be wound with any desired pitch. With the tool go taps, dies, cutters, etc.

HYRATE VOLT CHECKER.

The Hyrate volt checker is a new device added to the electrical equipment manufactured by Service Station Supply Co., 30-32 E. Larned St., Detroit. It is a volt meter with a zero center scale reading to 3 volts on either side. It has two side spikes, and a convenient handle. A great advantage of the Hyrate device is that with its stationary prods and its zero center scale only one hand is employed to make the reading, leaving the other hand free to record readings. Furthermore, with the zero center scale there is no danger of reversing the meter, as the needle swings either way. Another desirable feature is ability to promptly find "polarity," which is determined readily as the needle swings always to the negative post, and instructions are so recorded on the face of the instrument itself. Price $12.50.



HYRATE VOLT CHECKER.

BOOK ON DIFFERENTIAL GEAR INSTALLATION.

Installation of a ring gear and pinion in the rear axle requires, from start to finish, a great deal of care. It should be undertaken only by a mechanic skilled in axle work. Many broken differential cases, stripped gears and broken pinions are due to inexperienced workmen.

Differential Gear Installation, which is styled a pamphlet by its publisher, T. L. Camp, manager of Automotive Gear Works, Los Angeles, actually is an exhaustive, not too technical work on the subject. It treats of axle housing cleaning, removing old rivets, truing up case, riveting, pinion and shaft examination, bearings, gear teeth adjustment, running-in test, straight tooth gear installation, axle housing aligning, and gear pitch.

DIFFERENTIAL GEAR INSTALLATION

A VALUABLE BOOK, FREE.

Several difficult problems are explained, accompanied by illustrations, and the whole is a condensation of ideas, based on Mr. Camp's practical experience and a questionnaire among the best authorities on the subject. It is elaborated on a scale previously expected only from large Eastern factories, but is being sent free on receipt of numerous requests from garagemen, repairmen and machinists throughout the Pacific region, in which the company has active branches at Los Angeles and Seattle.

FOLEY TRACTION RIM.

Foley Traction Rim Co., 109-11 10th St. South. Minneapolis. Minn., manufactures Foley traction rims for pneumatic tired trucks used on soft, sandy roads or in field work. It is a metal flanged device. attached on the wheel's outer side by bands encircling the tire, or by bolts around spokes or across inner side of wheel hub. Tire is protected from chain contact when applied, and tire side wall cannot be chafed or torn. It is claimed traction is tripled, tire life doubled, and the quick application of nonskid chains easy—though only necessary on slippery clay.

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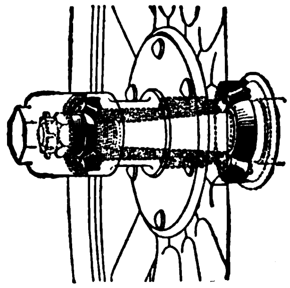

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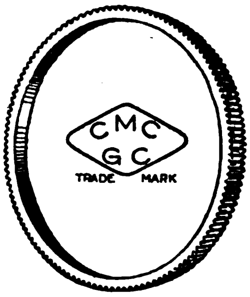

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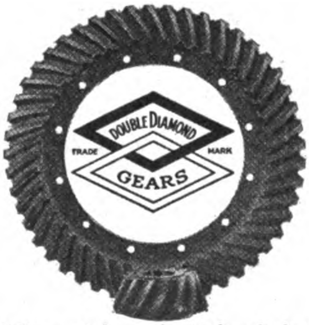

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Every Plug Guaranteed to Fire Perfectly for 1 Year.

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They Increase the Spark About 100 per cent.

Agents and Distributors Wanted.

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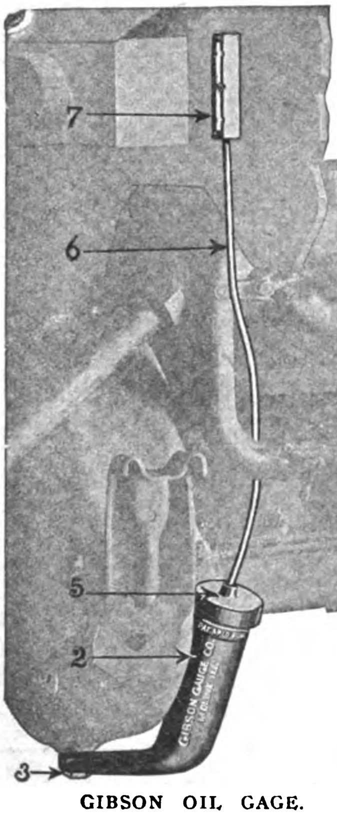
GIBSON OIL GAGE.

The Gibson oil gage for Ford cars attaches to the drain hole of the crankcase and has a flexible connection to an easily read indicator mounted on the dash, in front of the driver. It need not be on level ground to indicate the correct oil level, and has no brazed, soldered nor screwed-on parts to work loose or break, it is claimed. It attaches directly to the crankcase in a position protected from vibration and road obstructions. The indicating head, fastened to the body, may move with it, or the engine may vibrate in relation to the body, without damage to the gage, because of the flexible, dust-tight, felt washer connection between the gage's two main parts. The reliable float operates by change of oil level directly to the indicator, with no complicated parts. According to the manufacturer, Gibson Gauge Co., 2304 7th Ave., Moline, Ill., the basic thought has been that the float should be as near the center vertical plane of the engine as possible, and the indicator should be constantly and comfortably visible to the driver without any effort on his part. Price $3.



GIBSON OIL GAGE.

PENBERTHY PRODUCTS.

Penco Corp., General Motors Building, Detroit, is now exclusive selling company for all automotive products of Penberthy Injector Co., Detroit. Homer S. Johnson, vice president and general manager for Penberthy for 17 years, is now president of Penco.

Penberthy products include the Ball & Ball carburetor, for some years past standard equipment on Locomobile, Mercer, Peerless, Studebaker Big Six and King Eight cars. Another device, Penberthy Re-Atomizer, which functions by picking up and reatomizing the gasoline that condenses on carburetor and manifold walls and delivering it as highly combustible spray equally to all cylinders, has been sold extensively by garages and car dealers for the past year and a half.

Two types of Flometers, one for installation on the dash of cars and trucks with the vacuum feed system, and the other a portable service instrument, both showing miles per gallon at a glance, and a gasoline gage for Ford cars, comprises the present line. All covered by patents and the Penberthy trademark, well known through wide publicity since 1886.

Penco Corp. is marketing through distributors throughout the United States and foreign countries, with several district offices in this country.

SURLOK IS SURE-LOCK.

A new steering wheel lock, the Surlok, has been introduced by Detroit Motor Casting Co., Detroit. It is mounted in the steering wheel's case-hardened steel head and can not be picked, chiseled or sawed, it is claimed. It has two positive locking positions, making it impossible to drive or tow a car fitted with it, in other than a circle or a straight line. It is installed without modifying or replacing any standard part.

The Surlok is handsome in appearance. The rim is of hard, jet black composition material, which can not be scratched nor marred, and retains its finish indefinitely. Knobbed both inside and out, it offers a fine gripping surface. The spider is polished aluminum alloy.

The keyhole is on top, easily accessible at night. For Ford cars, another feature is the horn button mounting in the wheel center on top of steering post.

The car is steered with its regular mechanism, instead of through the lock tumblers, and the wheel can not become loosened from wear or sudden breaking of some part of the lock, it is claimed. Surlok has been approved by Underwriter's Laboratories and entitles a car owner to 15 per cent insurance discount.

TILLOTSON NEEDLE VALVES.

Fuel economy depends in great degree upon accuracy in the carburetor's needle valve. Using a watchmaker's lathe, Tillotson Mfg. Co, Toledo, O., manufacturer of Tillotson carburetors, uses the same accuracy in making the needle valves as is employed by skilled watchmakers in their work.

Monel metal, a drawn rod, used in Tillotson carburetors, is a metal that ordinary turning tears; but with a special compound, and the use of tools of high grade, high speed steel, Tillotson has mastered the difficult operation. These tools must be sharpened or honed with special oilstone after every tenth needle is turned out. Each needle is turned to a mirror-like surface, because scratches cause leakage. Tillotson needle valve surfaces are made true to the 10,000th part of an inch.

WESTINGHOUSE PLATES.

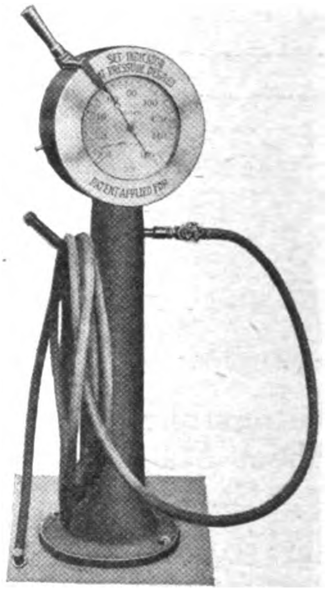
Westinghouse batteries, according to the manufacturer, Westinghouse Union Battery Co., Swissvale, Pa., have two more plates per cell than ordinary battery types. The increased area means 15 to 25 per cent more battery capacity and less strain on each individual plate. Seperators are of cypress wood, following exhaustive wear, resistance and insulating tests by Westinghouse engineers.

Battery posts are sealed with a flexible, acid-proof Westinghouse compound of pure gum rubber and lead, preventing cracked posts and plates and corroded terminals.

COOLEY TIRE INFLATOR.

The Cooley tire inflator, manufactured by Cooley Tire Inflator Co., 90 Columbia St., Seattle, Wash., is a device designed to shorten the time necessary for inflating tires in both service stations and private garages. Supplied separately from the usual air hose, it resembles a ship's signal apparatus, mounted on what resembles a large telephone stand, set on the floor. There is a simple reducing air valve working in conjunction with a reliable air gage 8½ inches in diameter. The indicator handle is turned to a predetermined number of pounds air pressure, shown on the dial, and when this pressure is reached in the tire the valve functions automatically and further air supply is cut off. Operation is so positive and automatic, it is claimed, that there can be no uncertainty as to the correct air pressure, which is indicated at all times on the dial, and there is no need for frequent tests by hand gage. Weight 125 pounds.

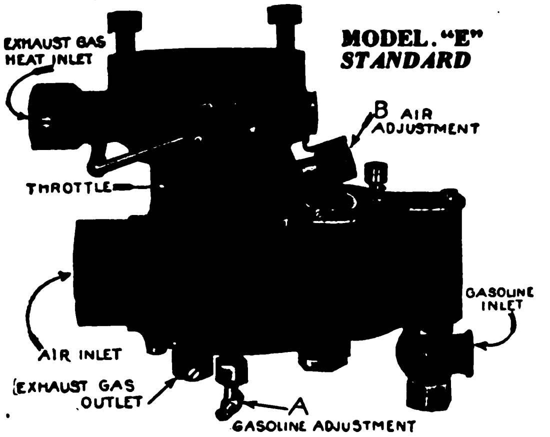
Many days' use in oil filling stations in Seattle showed that car owners served by it spent one-third less time at air service outlets. At one station, before installing it 25 cars, filling from one to five tires, took from 45 seconds to 6 minutes each. Using the Cooley device sent another 25 cars away in from 20 seconds to 4 minutes, despite time spent in conversation to gratify customers' curiosity. In the first case the average time per tire was 60.5 seconds; in the second, 48.1 seconds. Frank N. Cooley, the inventor, is sales manager of Western Electric Co., Seattle, and his brother, George R. Cooley, is manager of Cooley Tire Inflator Co. The device will be manufactured by H. R. L. Motor Co., Seattle, builder of H. R. L. motor trucks, and dealers will be appointed throughout the Western territory.



COOLEY TIRE INFLATOR.

QUAKER STATE OILS.

Waterhouse & Lester, San Francisco. with branches in other large Coast centers, will distribute Quaker State motor oils among the automotive trade west of the Rockies. It is a pure paraffin base lubricant, manufactured by Phinny Brothers Co., Oil City, Pa., for automobiles, motor trucks and tractors, and sold under the trademark "QSM."



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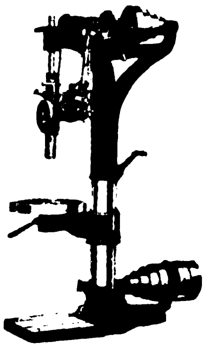

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The Union Oil Company service will advise you in the selection of the various grades of Aristo Motor Oils best suited for use in the motor of your car.

It is consistent lubrication such as "Aristo" Motor Oils provide that eliminates the wear and tear on a motor and increases the life and efficiency of a Motor Car.

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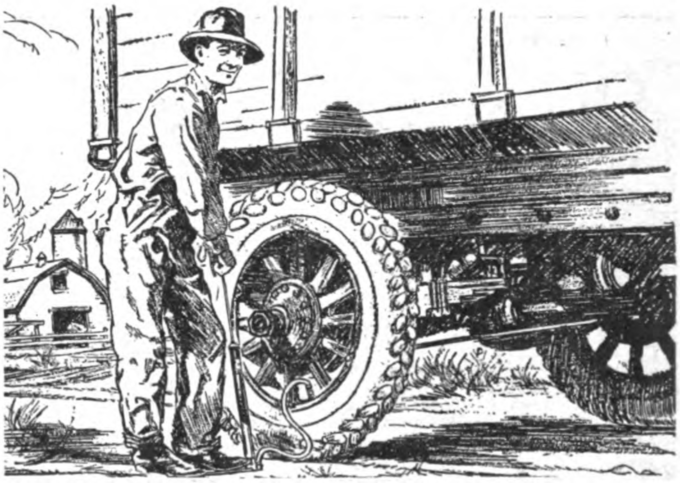
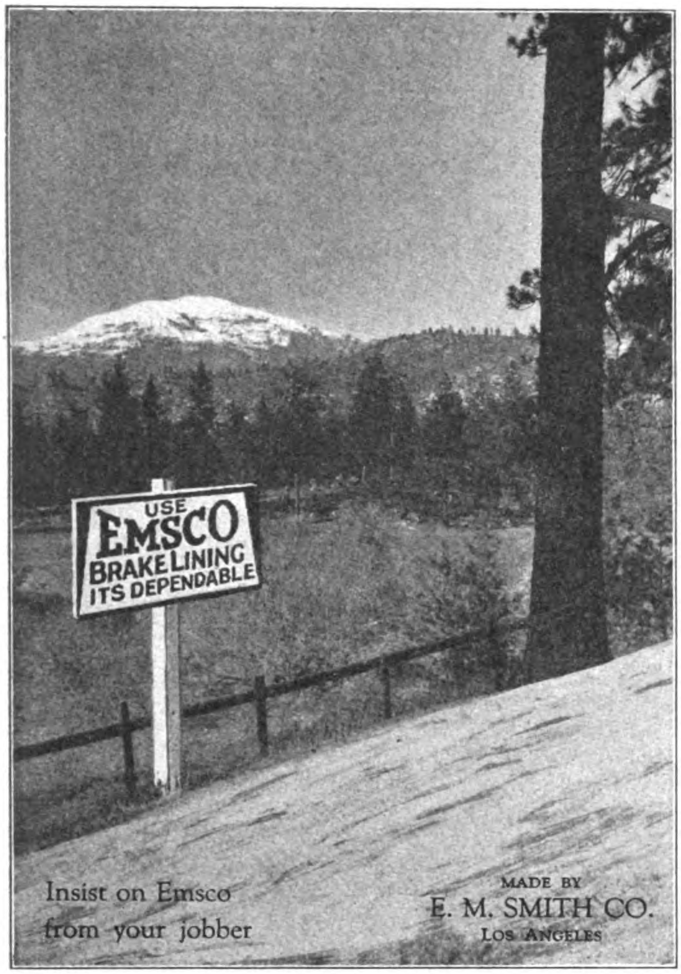


For Big Truck Tires

Never sell a weak tire pump to a truck owner—nor a hard working pump. Sell him a Rose. Sooner or later he will have trouble—miles from free air and no spare ready. Then he will thank you for selling him the easiest working pump made. Truck tires are a severe test—but the Rose makes easy work of them.

FRANK ROSE MFG. CO., HASTINGS, NEBR.

ROSE TIRE PUMP



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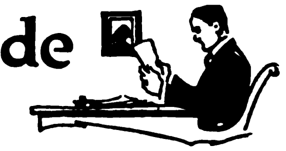
NEW YORK, 53 Murray St.
Pacific Coast Office: 304 Williams Building, San Francisco

MOTOR WEST

Reaches a larger percentage of dealers and repairmen than any automotive trade publication circulated on the

PACIFIC COAST

Western Trade Notes



Spokane, Wash.—Russell-Weimer Tire Co., S110 Post St., headed by O. N. Russell, has taken over the business of C. S. Heyburn & Co., former exclusive Goodyear solid truck tire distributor.—L. F. Olney, manager of Stewart-Warner Products Service Station, has erected a test route on East Sprague Ave. west of the city limits upon which drivers can test their new and repaired speedometers.—Main Ave. Garage, W44 Main Ave., Roe A. Kellogg proprietor, is having a new brick building built which will double its floor space to 14,000 square feet, storing 150 cars.

Dayton, Wash.—R. L. Rix Repair Shop has been moved to Dantscher Bldg., where it now has modern equipment and the Philadelphia storage battery agency.

Leavenworth, Wash.—Leavenworth Garage, L. C. Brender proprietor, has taken the Nash and Chevrolet agencies.

Orting, Wash.—J. J. Schrock has occupied his new garage, 36x54 feet, on Corrin Ave.

Waitsburg, Wash.—Waitsburg Garage has taken the Ford and Fordson agencies.

Pendleton, Ore.—Trombley Motor Co., headed by B. F. Trombley, 811 Garden St., has taken the Chevrolet agency for Umatilla and Morrow Counties.

Medford, Ore.—Valley Garage has been remodeled and equipped with modern equipment following a recent fire.

Astoria, Ore.—Nyquist Motor Co., C. A. Nyquist manager, has leased a 2 story building with 13,000 square feet to be erected on Commercial near 15th St. for its Velie and Chevrolet agencies.

Jacksonville, Ore.—E. S. Wilson has bought a building and adjoining lot on Main St. and has opened E. S. Wilson Garage.

Marshfield, Ore.—Motor Inn, operated by Clark & Noble, has taken the Durant car agency.

Crane, Ore.—Burns Garage Co. has bought the shop equipment and stock of Crane Garage on Main St. from O. E. Thompson and will occupy Crane Garage for offices, using Burns Garage as warehouse.

Lebanon, Ore.—Miller-Alton Service Station has been bought by C. E. Soule and Oscar Grisham, who will continue the battery service station.

Springfield, Ore.—J. D. Adams and W. D. Ingleside have bought Second Ave. Garage from R. G. McMasters and have added a battery service station.

Bend, Ore.—Bend Garage, Walter G. Coombs manager, is now one of the most modernly equipped garages in Oregon, employing 20 men and women, and with machine shop, repair shop, car washing, Buick, Cadillac and Chevrolet sales, and accessory sales departments.

Eureka, Cal.—George Bartlett, located in Ways Garage, 7th and D Sts., has taken the Gardner car agency for Huboldt County.

Kelseyville, Cal.—M. H. Dunbar has taken the Chevrolet agency.

Middletown, Cal.—Bert Levy is now Chevrolet dealer here.

Dixon, Cal.—Charles McGimsey has bought ground on A St. to erect a new garage to accommodate his growing Ford sales business.

Sacramento, Cal.—Tucker Brothers will build a new brick building, 50x80 feet, on ground adjoining their garage for manufacture of the Tucker wheel tightening device.

Adin, Cal.—E. W. Smith has bought D. J. Fay's interest in Fay & Smith Co. and has changed it to E. W. Smith Garage.

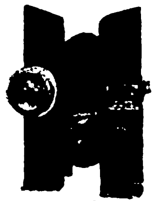
Placerville, Cal.—W. R. DeWolf, Hudson and Essex agency, has leased Morey Garage to handle these cars and a government mail carrying contract.

Vallejo, Cal.—H. A. Boelhauf has bought Briest & Abner Top works.

Sebastopol, Cal.—W. G. Stone of Cunningham Service Station has been made Mac-Dry battery service and sales station.

Boyes Springs, Cal.—E. Blomgren of Boyes Springs Garage has become subdealer for Sparks & Murphy, of Petaluma, handling Oakland, Chalmers and Cadillac cars.

Santa Rosa, Cal.—Ladue & Stetson, battery concern, has moved to Doig Garage on Mendocino Ave.; Doig will move to a new and larger building, 410 Mendocino Ave.—B. F. Drake has bought Louis Richardson's interest in Richardson & Webb, Main and 2nd Sts., Prest-O-Lite battery, Pennsylvania tire, and Century battery distributor, and it has been changed to Webb & Drake.—Nash Sales & Service Co., H. S. Gutermute manager, has bought Walden Garage on 5th St. and is remodeling it for sales quarters.



Oakland--San Diego--Los Angeles

OUR Percentage of "Come-Backs" is less than 3%.
Exchange service is of 95% efficiency.
Stock is the largest of its kind in the world.
Workmanship and materials cannot be excelled.

We Rewind AND REBUILD Armatures

For Automobile Starters and Generators

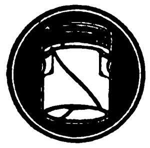
2-Year Guarantee

Write for Price List
and Discount

Dynamo-Electric Wks.

2315-17 S. Grand Los Angeles, California

Armature Tester
Ten Dollars Net



AMERICA'S FIRST SUCCESSFUL CLOSE-FITTING ALLOY PISTON

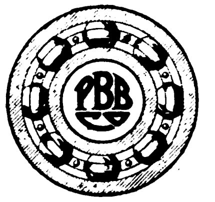
Light weight is gained, not by sacrificing metal, but by using a special alloy after our own formula.

The Patented Self-adjusting Spiral Slot, an exclusive Kant-Skore Feature, makes it possible to install Kant-Skore Pistons at the closest known clearance. And this clearance is maintained constant at all speeds. The advantage of this is apparent when it is known that loose-fitting pistons are the cause of most motor ills.

THE KANT-SKORE PISTON CO.
Cincinnati, Ohio
Factory Branch: Kansas City, Mo.
Distributors in all Principal Cities

Immediate delivery on any standard or oversize on more than 600 Models of cars and trucks. Write for Price List and liberal proposition.

Kant-Skore
PISTONS
WEIGH LIGHTEST · FIT TIGHTEST



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Large stock of all standard sizes on hand for immediate exchange.

Special Bearings Made to Order

Factory Distributors for New
FAFNIR BALL BEARINGS
BOWER ROLLER BEARINGS

PACIFIC BALL BEARING CO.
415 West Pico St. Los Angeles, Cal.

MORELAND MOTOR TRUCKS

Built on Honor in the West and for the West they are superior under its varied and rigorous conditions.

Powerful :: Dependable :: Economical

MORELAND SALES CORPORATION
LOS ANGELES, CALIFORNIA

BEST FOR THE WEST

WANTED!

The EWALD
FOOT ACCELERATOR
FOR FORDS

A hundred dollars worth of comfort and safety for 75 cents. Every Ford Owner needs and wants a foot accelerator. Comfort requires it. Safety demands it. The Ewald is unaffected by road jolts and jars.

Dealers and Jobbers—Write our sales dept. today for full details

Manufacturers
Romort Mfg. Co.
Oakfield, Wis.

Price 75c

Sales Dept.
THE ZINKE CO.
1327 Michigan Ave.
Chicago, Illinois

MORE POWER — LESS FUEL

SU-DIG SERIES PLUGS are the only spark plugs that produce TWO SIMULTANEOUS SPARKS in each cylinder when connected with the ordinary plug. The two opposed sparks ignite the mixture at two points at once. This burns the gas more than TWICE AS FAST, resulting in a wonderful INCREASE in POWER and GASOLINE MILEAGE, and WITHOUT ANY CHANGE IN THE PRESENT EQUIPMENT.

Free booklet, "How to Get More Power." Write for it. Please mention car.

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McCOY MOTOR SUPPLY CO., San Francisco, Los Angeles
SUPERIOR MOTOR POWER CO.
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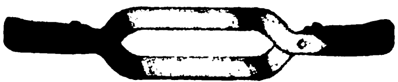

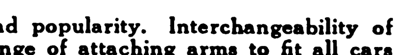

NEW ERA SPRING BUMPERS

Duplex "Senior" and "Junior"

Standard Spring Bumper

Their attractive design, massive construction, permanent guarantee, approval by Underwriters Laboratories and reasonable prices are factors which contribute to widespread popularity. Interchangeability of bars and free exchange of attaching arms to fit all cars make this a most desirable line to stock. Small investment, quick turn over, no dead stock.

Write for Catalog.

NEW ERA SPRING & SPECIALTY CO.
73 Cottage Grove Ave. Grand Rapids, Mich.
GRAF SALES CO., Williams Bldg., San Francisco, Calif.
Also Springs, Visors, Tire Carriers

Motor Wheel PRODUCTS

Gier Tuarc
Steel Wheels

Gier-Lewis
Steel Wheels

Gier Stampings

Wood Wheels for Cars and Trucks

MOTOR WHEEL CORPORATION - LANSING, MICHIGAN

BALL BEARINGS REGROUND

Immediate exchange on all sizes and types.

Distributors Hess-Bright New Bearings.

Ahlberg Bearing Company
1708 S. Grand
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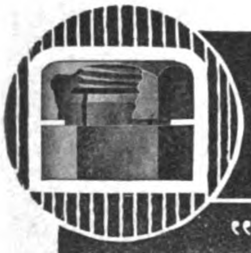
Portland San Francisco



DRAKE LOCK-NUTS

"Never Jar Loose"

SPECIFY ON UPKEEP AND NEW EQUIPMENT

USED BY BEST MANUFACTURERS

WRITE FOR SAMPLE

DRAKE LOCK-NUT CO.

PLANTS: CLEVELAND SAN FRANCISCO

SINGER PROCESS PISTON PINS

We Carry a Larger Stock of Pins than Any Exclusive Piston Pin Manufacturer in the United States

We Manufacture Piston Pins for all Makes Automobiles, Trucks and Tractors

Unequaled for quality. 200,000 in stock, ready for shipment to any point. Full particulars, prices and discounts mailed on request.

JOE SINGER MACHINE WORKS

2116 So. Los Angeles St. Los Angeles, Calif.

Big Profits for Live Dealers!

Motorists find it easy and economical to repair leaky radiators and make other repairs around cars with Smooth-On Iron Cement No. 1.

Our national advertising is driving home the wonderful Smooth-On message to car owners—daily new Smooth-On customers are being made.

Smooth-On is also unequalled for repairing leaky radiator edges, rubber hose connections, cracked water jackets, pumps, etc.

Write us today for further particulars on dealer proposition.

Smooth-On No. 1 is sold by Supply Houses in 6 oz., 1 lb. and 5 lb. tins. Also in larger sizes.

GARAGEMEN. Write for booklet and learn how you can make big profits repairing leaky radiators and other automobile parts with Smooth-On. It's FREE.

SMOOTH-ON MFG. COMPANY
Dept. 38-J Jersey City, N. J., U. S. A.

Do it with SMOOTH-ON

Los Angeles, Cal.—Electric Vehicle Co. of California has been incorporated for $25,000 by W. L. Conzelman, Charles B. Hoffer, C. de Blin, and others.—Classic Motor Co., Oakland car agency, is having a $50,000 building erected for it at North Western and La Mirada Aves.—Edward Alexander and D. R. Hatton have opened a repair shop, 7300 Sunset Blvd.—J. E. Bates has taken over management of El Centro Ave. Garage, 1649 El Centro Ave.—Munro-Harrison Motor Co., Gardner agency, has moved from 1680 N. Western Ave. to 5850 Hollywood Blvd.

Pasadena, Cal.—C. M. Sayers has opened Sayers Auto Supply Co., 55 W. Colorado St.—R. O. Blair has bought the interests of C. A. Fulton in Blair & Fulton Garage, 35-37 W. Green St.—Wilson & Meyer Tire Co. has opened at 203 S. Fair Oaks Ave.—The Lexington car agency here has been taken by C. H. Smith Motor Co., opening at 323 E. Colorado St.

Baldwin Park, Cal.—R. F. Bingham has bought Baldwin Park Garage.

Gardena, Cal.—Paul Cramer and Dell Jenkins have bought Boulevard Garage from C. W. Clossen.—Simms & Moffett have leased King's Garage, Walnut and Vermont Sts.

Hawthorne, Cal.—J. A. Jensen has opened Jensen's Garage, Willow and Hawthorne Sts.

Sawtelle, Cal.—Jim Proctor and William Crane have opened Willys-Knight Overland Agency, 2812 Main St.

San Pedro, Cal.—S. P. Haan and T. H. Wakesman have opened Pacific Battery & Electric Shop, 7th and Pacific Sts.—Dan Shortz, 11th and Pacific Sts., has become Maxwell car dealer.

Long Beach, Cal.—J. D. and G. W. Kopsho, operating K. & K. Auto Electric Co., 41 American Ave., have taken the agency for Prest-O-Lite storage batteries in Long Beach.—Bodum Brothers have opened at 1511 American Ave., handling Pierce-Arrow and Peerless cars.—Robert and Paul Graham have opened Long Beach Kimball agency, 14th and Obispo Sts., handling Kimball trucks.

Alhambra, Cal.—Western Auto Supply Co. has opened a branch, 123 W. Main St.—Teter Motor Car Co. will have a $45,000 garage erected for it, Curtis and Main Sts.

Bellflower, Cal.—C. A. Conrad and Roy E. Moore have occupied the new Somerset Ave. Garage, built next to Bellflower Garage.

Whittier, Cal.—William Reed and Ray Oxnard have opened Paige & Jewett Sales Co., 120 N. Comstock Ave., handling Paige and Jewett cars.—Tom Frampton and H. T. Dougherty have opened a tire sales and vulcanizing shop, 136 S. Greenleaf Ave.

San Dimas, Cal.—F. H. Meyer and H. L. Varcoe have taken the Chevrolet agency, located in Bonita Ave. Garage.—J. W. Randall has bought the interest of his partner, T. F. Lane, in San Dimas Vulcanizing Works.

Santa Ana, Cal.—H. A. Shugart & Son, are having a modern garage built on East 5th St., to be completed about Nov. 1.

San Bernardino, Cal.—Console Inside Timer Co. has been formed here by John Console, Jr., to manufacture a Ford timer, in which several local men are said to be financially interested.

Redlands, Cal.—J. M. C Motor Repair Co., formed of Fred Jolley, Simon J. Miller and Waldron J. Cheyney, all with many years' automotive repair experience, has leased part of the new building being built for Spoor & Yerxa, Durant agency, at Orange and Santa Fe tracks.

Bell, Cal.—Moore & Lowder have opened an automobile accessory store, 541 Baker Ave.

Newport Beach, Cal.—Tom Bouchy has opened East Newport Garage Machine & Repair Shop, formerly conducted by A. H. Willson.

Oceanside, Cal.—F. G. Barnard and W. L. Carter has bought Service Garage.

San Diego, Cal.—Automobile Tire Co., 2nd and B Sts., has been taken over by Ginsberg & Greenberg and changed in name to San Diego Automobile Tire Co.

National City, Cal.—W. R. Nichols has bought half interest in Boulevard Garage, Division and First Sts., from R. C. Smeltzer.

La Mesa, Cal.—L. M. Washburn and H. H. McCleary have been made Ford and Fordson agents here.

Santa Clara, Cal.—E. E. Hatch has bought the interests of S. D. Cowden and S. McAndrews in Santa Clara Ford Agency.

Mountain View, Cal.—H. C. Auto Parts Corp., capital stock $500,000 has been formed by W. F. Hills, W. H. Clard, T. H. Sheldon, and others.

Glendale, Cal.—George T. Smith has been elected president of Glendale Motor Car Dealers' Association, succeeding George Clayton, resigned.

MOTOR WEST'S REGIONAL MOTOR MART

RATES—One time, $4.50 per inch; three times, $4.25 per inch; six times, $4.00 per inch; twelve times, $3.75 per inch; twenty-four times, $3.25 per in.

PISTON RINGS PISTON RINGS

OIL KONTROL

PATENT APPLIED FOR.

RINGS

CONTROL the OIL CONTROL your TRADE

QUALITY Largest Profit RELIABILITY

All distributors for the genuine and original OIL KONTROL Piston Rings are appointed direct from the factory. Samples furnished jobbers and distributors

SUNSET MANUFACTURING CO., 1328 East Sixth Street
Los Angeles, California

CYLINDER REGRINDING CYLINDER REGRINDING

REGISTERED B-N U.S. PAT. OFFICE

PISTON PINS

Make Repair Jobs More Profitable

Because of Extra Quality in Material and Workmanship

24-HOUR SERVICE FROM THESE JOBBERS—

Davenport, Iowa—Sieg Company
Los Angeles, Cal.—Weinstock-Nichols Co.
Oakland, Cal.—Weinstock-Nichols Co.
Waco, Texas—Archenhold Auto Supply Co.
San Francisco, Cal.—Bryce Howatson
—Weinstock-Nichols Co.

BURGESS-NORTON MANUFACTURING COMPANY
526 Peyton Street Geneva, Illinois

SPRINGS

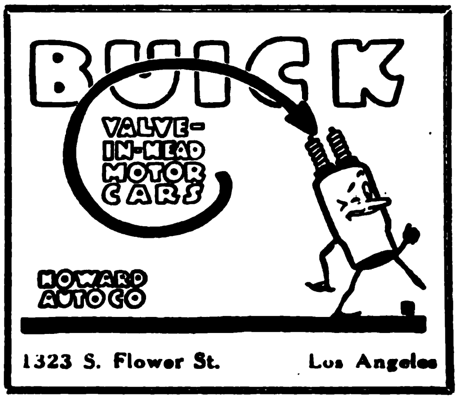
CAMBRIA SPRING COMPANY
"Largest West of the Mississippi"
CHROME VANADIUM AND CARBON STEEL SPRINGS

"CAMBRIA TWIN BAR BUMPERS"
Unbreakable, Rattle and Squeak Proof

FOR AUTOS AND TRUCKS
High Grade Hickory Wheels
Demountable Rims Applied
Wrecking Jobs our Specialty
Tire Racks—Forgings
Pacific Coast Distributors
Madison "Oil Kipps"

Main 3733. 916 So. Los Angeles St.

AUTOMOBILES



1323 S. Flower St. Los Angeles

FORD VALVE ADJUSTERS

TOWNSAN VALVE ADJUSTER
Best little accessory ever put on a FORD
and the price is a trifle

WESTERN AUTO-SUPPLY COMPANY
PACIFIC COAST DISTRIBUTORS
Write for Open Territory

Manufactured by
CHADBOURNE SALES CO.
1024 Ramsey St. N. E. Minneapolis, Minn.

Graham, New King Superintendent.

King Motor Car Co., Detroit, announces C. L. Graham as factory superintendent. Mr. Graham has been connected in the industry many years, serving in a similar position with General Motors, in Flint, 4 years, later going to Alma, as production manager of Republic Truck.

The King Co. was one of the few to get through the 1921 depression without closing its plant. Early this year, maximum production was attained and has been held.

* * *

Back to Australasia.

W. T. Longwell, after a month at the Maxwell-Chalmers factories, went to Vancouver, B. C., to sail to Sydney, Australia, to resume his duties as special representative of the Maxwell-Chalmers companies in Australasia and South Africa. Mr. Longwell was absent about two years on his last trip and expects that his present travels will consume as long a time.

* * *

Hopkins from Denby to Rackliff.

Benton Hopkins, formerly advertising manager of Denby Motor Truck Co., has joined H. L. Rackliff Co., automotive marketing counsellor, of Cleveland and New York.

* * *

Cadillac Beating Record.

In a statement issued by H. H. Rice, president of Cadillac, present rate of production and sales is declared considerably in excess of all previous schedules.

* * *

Hawk to Handle Baker Sales.

Homer V. Hawk has been appointed exclusive representative in charge of sales for the automotive products of A. T. Baker & Co., Inc. Mr. Hawk, for eight years, was purchasing agent of Willys-Overland, and at one time was connected with the old Stoddard-Dayton Co. in Toledo.

* * *

Cyclone In Receivers' Hands.

Cyclone Motors Corp., formerly Cyclone Starter & Truck Co., Greenville, S. C., is in receivership.

* * *

RACINE RUBBER COMPANY
RACINE
Absorbing
ShockStrip

RACINE RUBBER COMPANY

Through its splendid organization of distributors, is able to render a most profitable service to dealers who sell Racine Extra Tested Tires.

Three distinct tires—the famous Racine Multi-Mile Cord, the well known Racine Country Road (fabric) and the Racine Trusty Tread, a fabric tire of high quality and low price.

Racine distributors can show you how to build your tire profits. It will pay you to write your nearest Racine distributor, or communicate with us.

RACINE RUBBER COMPANY
Racine, Wisconsin
Distributors at all convenient points

It Welds the Tread and the Carcass—Inseparably

RACINE
MULTI-MILE
CORD TIRES

The Famous Black Tread
Racine Multi-Mile Cord

TRANSPORT TRUCKS

A Specialized Truck for Every Service

Whatever Your Prospect's Need Transport Has the Truck

A truck built and specialized for the particular need of every possible truck buyer in your territory—from light, fast delivery to heavy 10,000-pound service—with quality-assurance founded on Transport's impressive history of performance in all lines of hauling. Transport prepares you 100% to go out and get the business in 1922.

SIX New Models at LOW Prices

The Transport line sets a new mark in high quality at low prices. Transport units are products of the world's leading specialists—and added values are embodied in Transport's own exclusive features—Automatic Chassis Lubrication—Transport Improvement of the Drive Shaft Brake—and Specially Designed Radius Rods.

The complete equipment of all Transport trucks also enables you to show your customers a big money-saving.

Transport trucks are products of one of the finest exclusive truck factories in the United States—backed by a strong, well-financed organization—insuring the utmost in values and continual service.

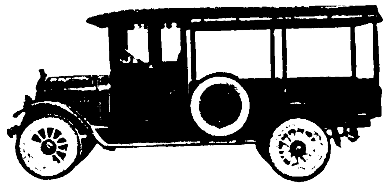
Let us give you the names of old and well-established distributors who have selected Transport to stimulate their present business and build their future. They like the Transport contract because it safeguards their interests as well as ours. It's the kind of a contract that we would sign as a dealer. Write us for details.

Transport Truck Co., Mount Pleasant, Mich.

Northwest Transport Truck Co.
510 Railroad Ave.,
Spokane, Wash.

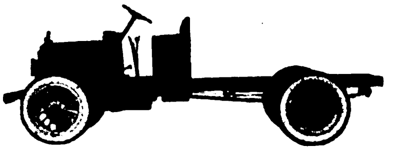
D. F. Poyer & Son
324 E. Sixth St.
Los Angeles, Calif.

D. G. Westbrook
364 Hayes St.
San Francisco, Cal.



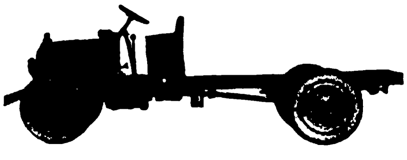
Model 15—2,000 Pounds Capacity

Rapid Transport, fast, 2,000-lb. (maximum) speed job, equipped with cord tires, electric lights and starter, seat, windshield, fenders and running boards, motometer, speedometer, bumper, extra rim, and carrier - **$1295**



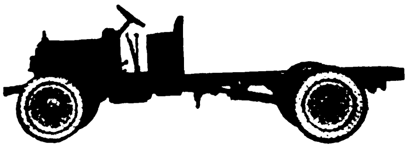
Model 25—3,000 Pounds Capacity

3,000-lb. (maximum), complete with electric lights, front fenders, bumper, radiator guards, hubodometer and motometer - - - **$1495**



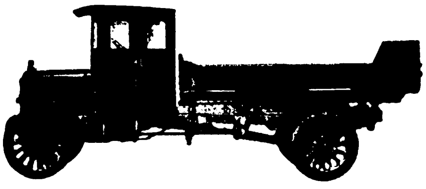
Model 35—4,000 Pounds Capacity

4,000-lb. (maximum), equipped with radius rods, drive-shaft brake, four-speed transmission, electric lights, Duplex Engine Governor, front fenders, bumper, hubodometer and motometer - **$1885**



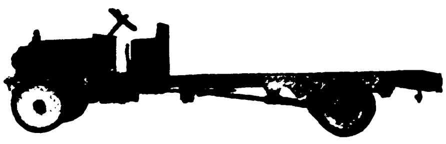
Model 55—6,000 Pounds Capacity

6,000-lb. (maximum), same equipment as Model 35 - - - - - - **$2385**



Model 60—7,000 Pounds Capacity

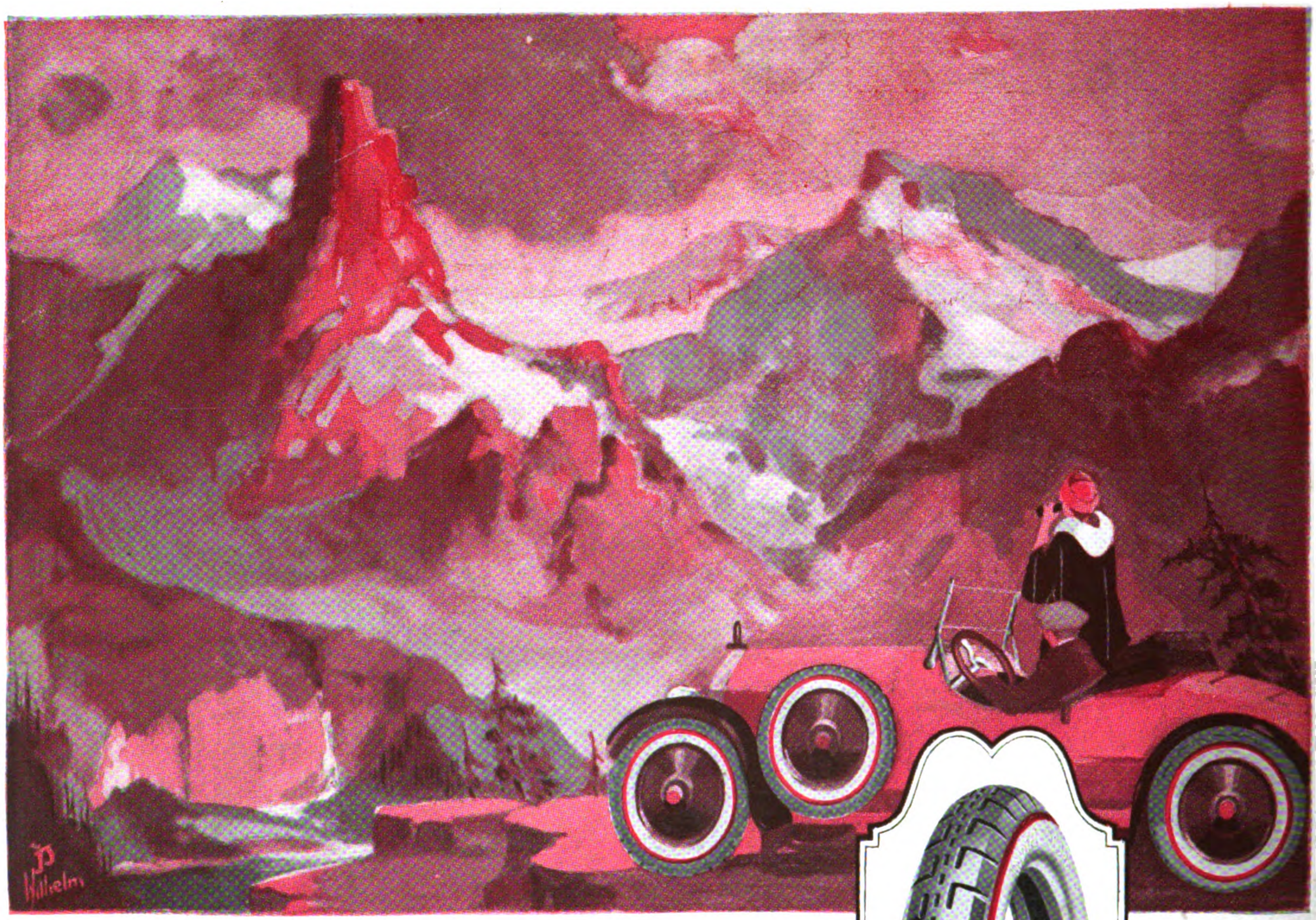
Contractor's Special, (Dump), 7,000-lb. (maximum) same equipment as Model 35 - - - - - - **$2585**



Model 75—10,000 Pounds Capacity

10,000-lb. (maximum) same equipment as Model 35 - - - - - - **$3485**

INDIA~TIRES



Pleasure Insurance~

If pleasure insurance is the question, India Tire is the answer.

Strictly custom-made by craftsmen, they appeal to motorists who want something out of the ordinary.

Whether you use tires or sell them, India Tires will give you an entirely new conception of quality and economy.

Known from coast to coast as America's best pleasure insurance.

THE INDIA TIRE & RUBBER CO. OF CALIF.,
455 Second Street, San Francisco

The INDIA TIRE & RUBBER CO.
Akron, Ohio

INDIA

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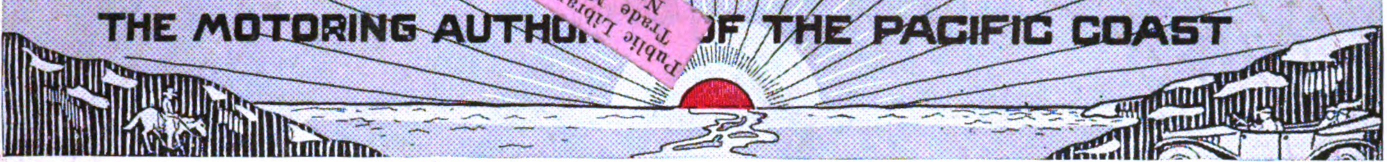
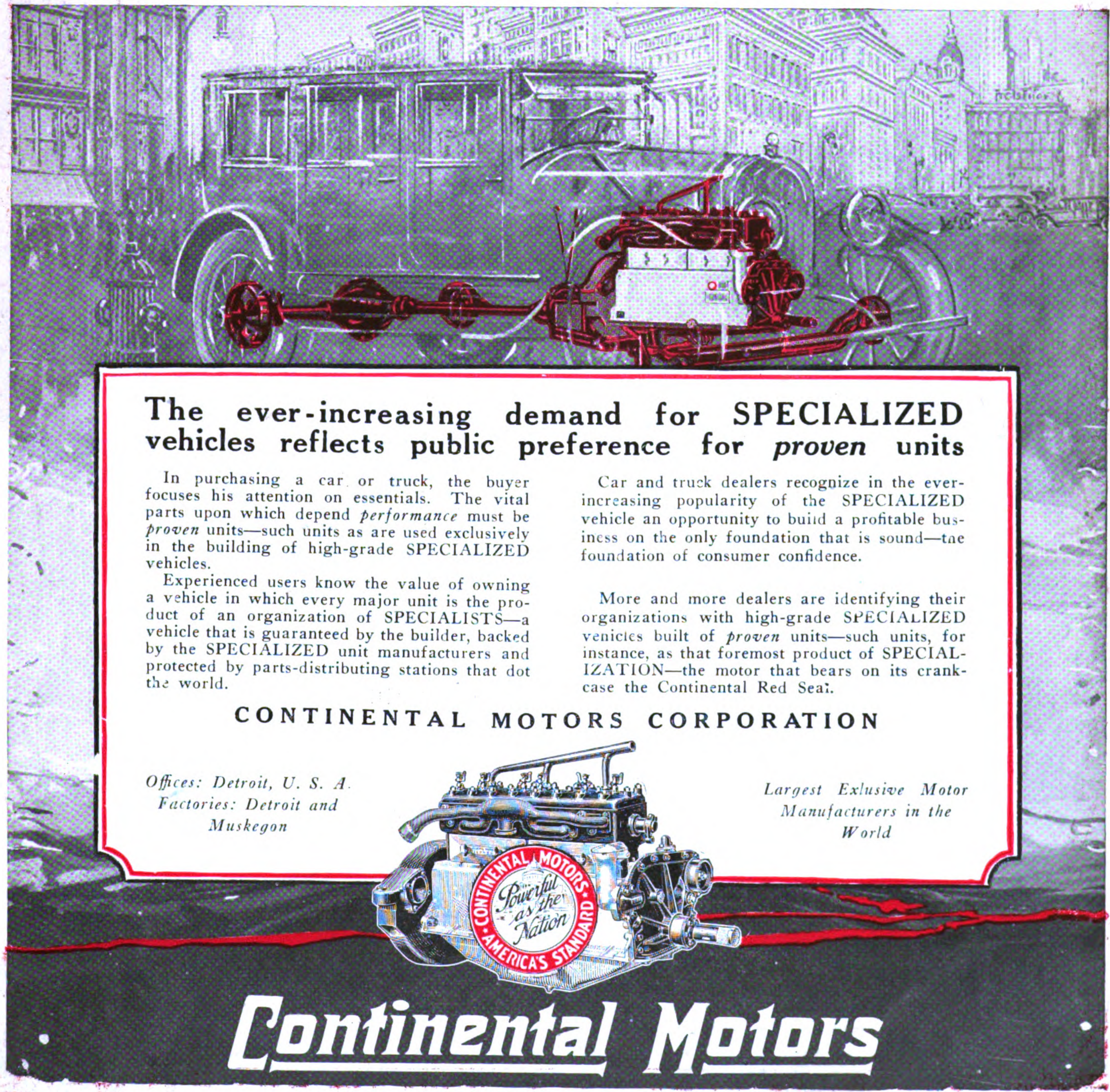
Motor West

THE MOTORING AUTHORITY OF THE PACIFIC COAST



VOL. XXXVII, No. 2 MAY 1, 1922 $3.00 A YEAR, 20c A COPY



The ever-increasing demand for SPECIALIZED vehicles reflects public preference for *proven* units

In purchasing a car or truck, the buyer focuses his attention on essentials. The vital parts upon which depend *performance* must be *proven* units—such units as are used exclusively in the building of high-grade SPECIALIZED vehicles.

Experienced users know the value of owning a vehicle in which every major unit is the product of an organization of SPECIALISTS—a vehicle that is guaranteed by the builder, backed by the SPECIALIZED unit manufacturers and protected by parts-distributing stations that dot the world.

Car and truck dealers recognize in the ever-increasing popularity of the SPECIALIZED vehicle an opportunity to build a profitable business on the only foundation that is sound—the foundation of consumer confidence.

More and more dealers are identifying their organizations with high-grade SPECIALIZED vehicles built of *proven* units—such units, for instance, as that foremost product of SPECIALIZATION—the motor that bears on its crankcase the Continental Red Seal.

CONTINENTAL MOTORS CORPORATION

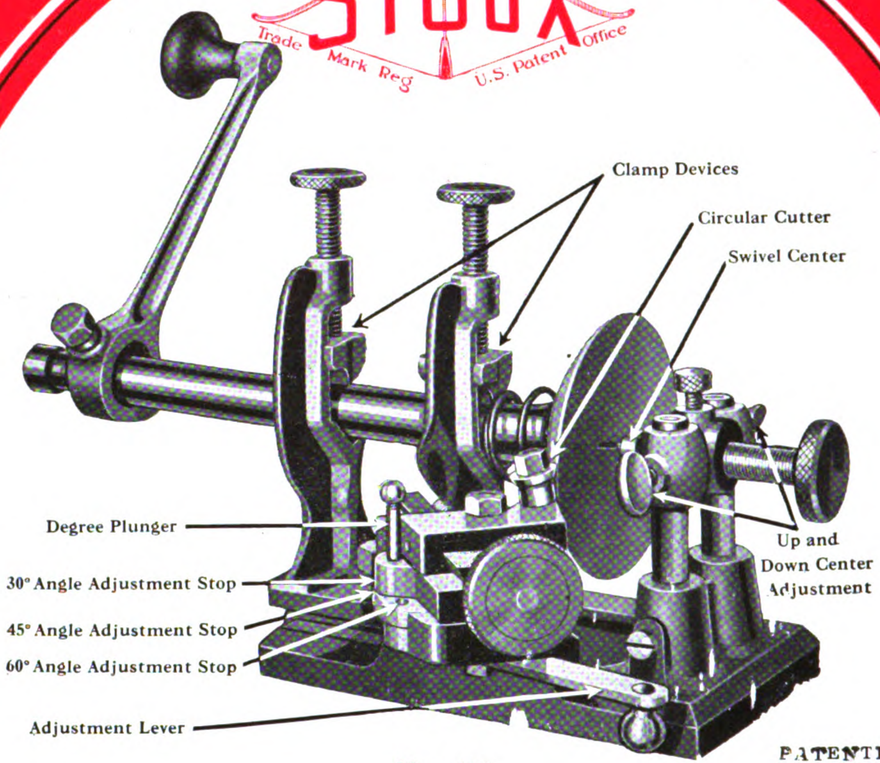
Offices: Detroit, U. S. A.
Factories: Detroit and Muskegon

Largest Exlusive Motor Manufacturers in the World

ADVERTISERS' INDEX PAGE 3

SIOUX VALVE LATHE

SIOUX
Trade Mark Reg U.S. Patent Office


Clamp Devices
Circular Cutter
Swivel Center
Degree Plunger
30° Angle Adjustment Stop
45° Angle Adjustment Stop
60° Angle Adjustment Stop
Up and Down Center Adjustment
Adjustment Lever

No. 600

PATENTED:
Feb. 17, 1914
Nov. 26, 1918
Others pending

Refaces Valves with Accuracy and Speed

Takes care of small jobs as well as the large. Refaces valves from 1⅜" to 4½" with either a 30, 45 or 60 degree angle.

The Sioux Valve Lathe is simplicity itself. No tedious adjustments. So simple a novice can operate it. More accurate than a machine lathe.

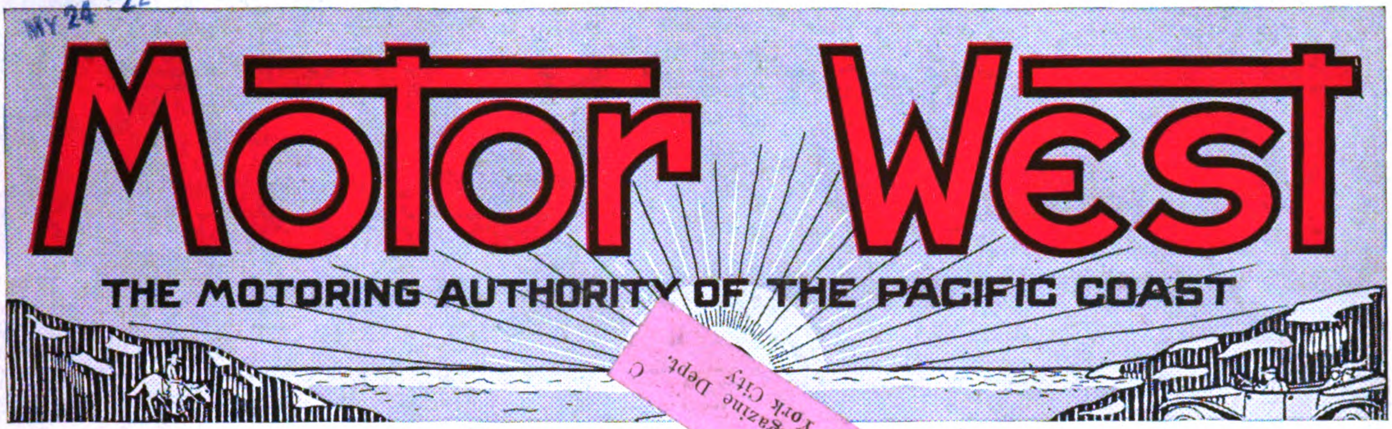
Cutter can not get out of line. Round cutter insures smooth face on any steel or cast iron valve, without shattering or leaving ridges and gives unlimited cutting edge—will outlast ten ordinary cutters. Valve is self-centering in lathe. Clamps hold valve in alignment. All adjustments accurately and permanently built into tools. Fully equipped with proper springs for handling all sizes of valves. Has two cranks—one for small and one for large valves. Lathe will fasten permanently to bench or fit into a vice.

SIOUX SERVICE keeps cutter sharp at no cost to you but carrying charges. When cutters get dull, send them prepaid and direct to us, including return postage, and they will be sharpened and returned the same day received. We maintain a special department for this service. Be sure you get SIOUX TOOLS if you want SIOUX SERVICE.

All Live Jobbers Handle Them

ALBERTSON & CO. SIOUX CITY, IOWA

MY 24 '22



MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 3 MAY 15, 192 $3.00 A YEAR, 20c A COPY

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Announcing New

Lexington

MINUTE MAN SIX

(Series 22)

$1745

This price is **$240 LESS** than lowest previous price on a Lexington equipped with famous Ansted Engine, including Moore Multiple Exhaust System

70 horse power—123-inch wheelbase—32 x 4½-inch cord tires—genuine leather upholstery—cable brake system and other exclusive features

We Have a Proposition for 1000 New Dealers!

Wire or Write for it Today!

LEXINGTON MOTOR COMPANY : : : CONNERSVILLE, INDIANA, U. S. A.

Subsidiary United States Automotive Corporation

ADVERTISERS' INDEX PAGE 3

SIOUX FLEXIBLE SHAFT ATTACHMENT

Takes the Tool to the Work

TRANSMITS the power at point where you want it. Has unlimited uses in every shop. Handy for getting under car or working in cramped quarters. No need to take car apart.

Can be driven by an electric drill ½ inch capacity or more, or direct from line shaft, lathe, drill press, emery wheel stand or any power that will drive shaft at a speed of 1,000 to 1,725 r. p. m.

We can furnish ¼ h. p. motor, 1,725 r.p.m. and pulley. Prices on application. If you have motor, specify speed and size of shaft for correct pulley. Price of pulley on application.

Is especially adapted for *Emery Wheel Grinding, Drilling, Reaming, Polishing*—for Tire buffing work in *Tire Repair Shops* and for *Valve Grinding*. With its *three speed pulley* and the Sioux Valve Grinding attachment it has no equal. The control enables you to stop grinder, in order to lay it down when you desire to clean the valve, without shutting off the power. This control enables you to stop and start at will the tool being used.

EQUIPMENT—includes stand, Sioux Valve Grinder Attachment, Flexible Shaft with Universal Joint and spindle control, large pulley wheel, three-speed drive pulley and belt.

No. 800 Complete as Above.
No. 801 without Valve Grinding Attachment.

Liberal Discount to Dealers

Extra equipment can be had as follows:

Arbors, ½" x 4" Emery Wheel, 4" Wire Wheel Brush, ¼" capacity Chuck including Arbor and Drill Chuck Arbor only for ¼" Chuck. Prices on application. Jacob's Chucks used as regular equipment.

Sioux Valve Grinding Attachment

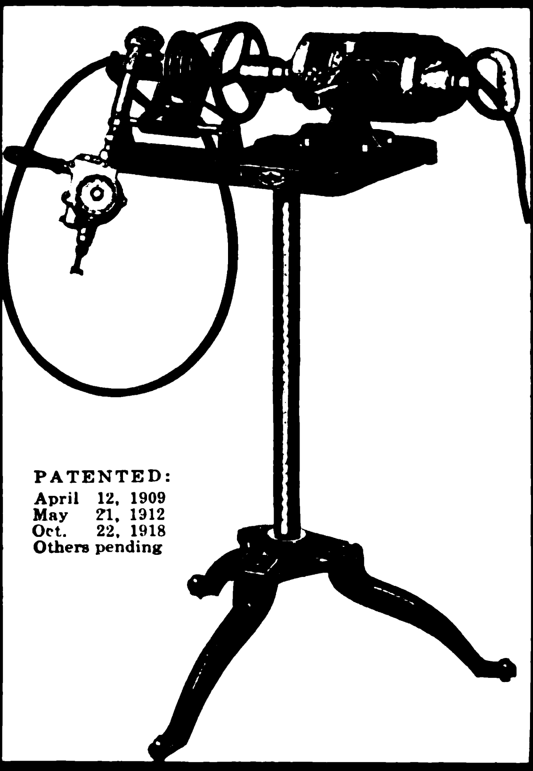
For electric, pneumatic or belt driven devices gives you complete power grinding equipment. Saves time and makes job more profitable. It produces speed and motion of hand grinder and has same motion as Sioux Hand Grinder, being geared down by means of a worm gear which gives power to spare for grinding any sized valves.

It is light and easy to handle. Case cast in aluminum. Gears set in bronze fitted with ball bearings throughout. The worm has ball end thrust. Gears run in hard oil. There is nothing to wear out and it is guaranteed for a lifetime. Two different size shanks enable it to fit any power driven device with Jacobs chuck ¼" on up. Attachment comes supplied with proper lifting springs for jumping valves and driving points to fit all size valves.

SOLD BY ALL LIVE JOBBERS

ALBERTSON & CO. SIOUX CITY, IOWA

SIOUX
Trade Mark Reg U.S. Patent Office



PATENTED:
April 12, 1909
May 21, 1912
Oct. 22, 1918
Others pending

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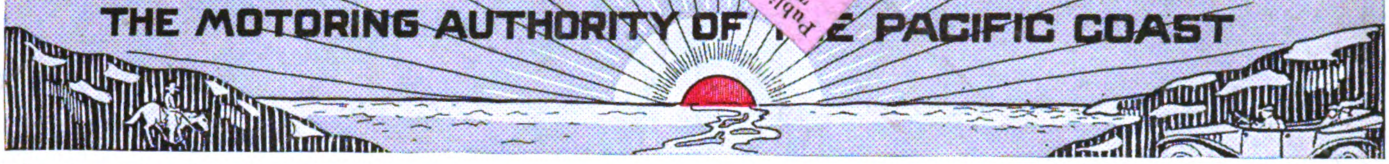
Motor West



THE MOTORING AUTHORITY OF THE PACIFIC COAST

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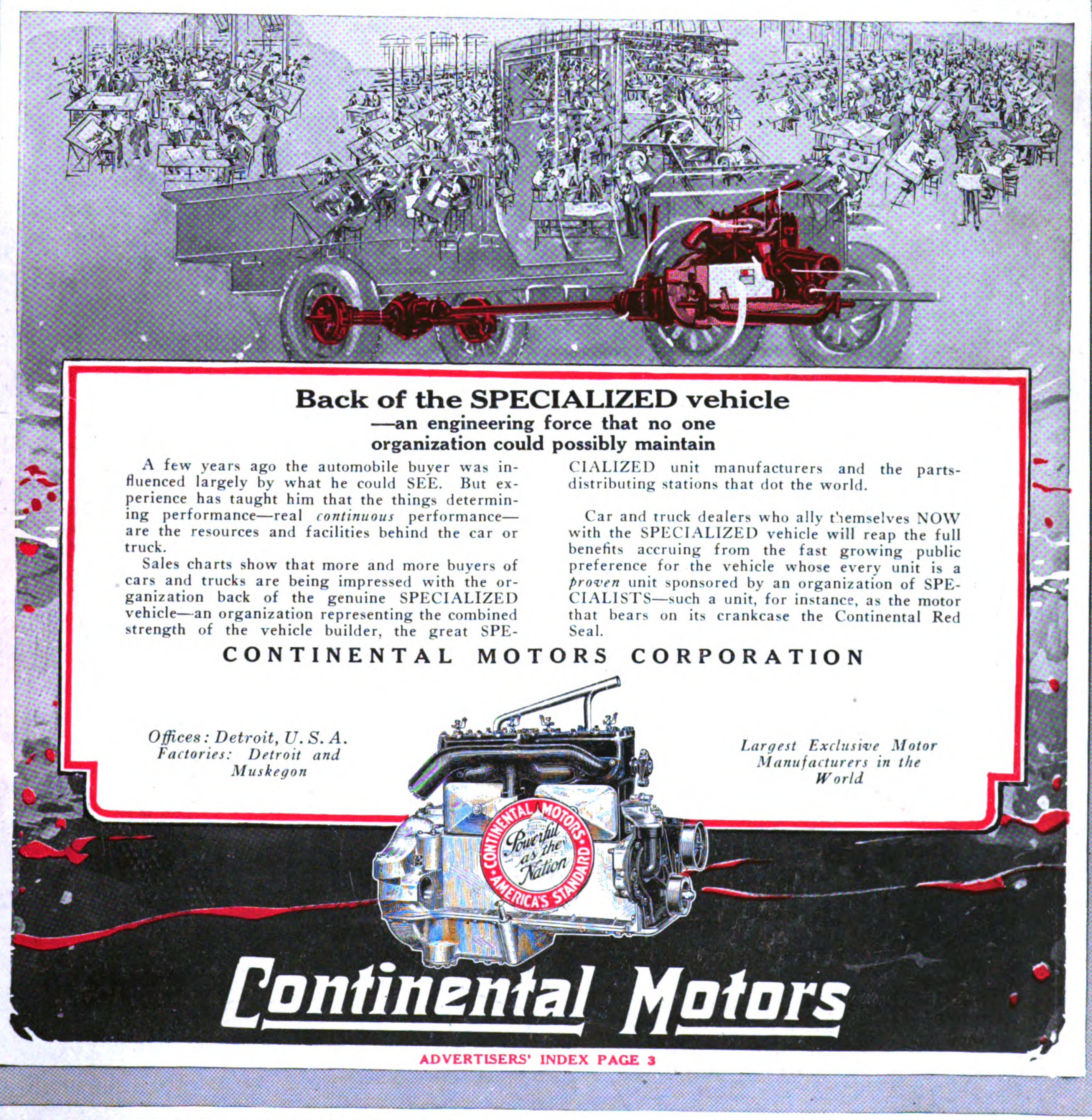


Back of the SPECIALIZED vehicle
—an engineering force that no one organization could possibly maintain

A few years ago the automobile buyer was influenced largely by what he could SEE. But experience has taught him that the things determining performance—real *continuous* performance—are the resources and facilities behind the car or truck.

Sales charts show that more and more buyers of cars and trucks are being impressed with the organization back of the genuine SPECIALIZED vehicle—an organization representing the combined strength of the vehicle builder, the great SPECIALIZED unit manufacturers and the parts-distributing stations that dot the world.

Car and truck dealers who ally themselves NOW with the SPECIALIZED vehicle will reap the full benefits accruing from the fast growing public preference for the vehicle whose every unit is a *proven* unit sponsored by an organization of SPECIALISTS—such a unit, for instance, as the motor that bears on its crankcase the Continental Red Seal.

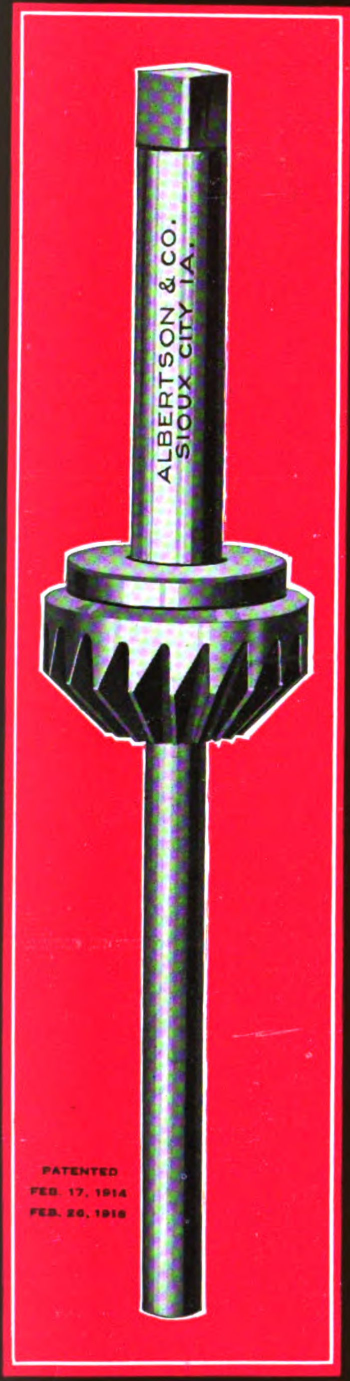
CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U. S. A.
Factories: Detroit and Muskegon

Largest Exclusive Motor Manufacturers in the World

Continental Motors

ADVERTISERS' INDEX PAGE 3



SIOUX REAMER

SAVE hours of tiresome valve grinding by removing the carbon pits and other irregularities from valve seats with this rapid cutting and absolutely accurate Sioux Reamer.

The Sioux Reamer Pilot extends through the valve stem guide and keeps reamer perfectly centered, thus insuring accurate cutting.

SIOUX SERVICE

keeps reamers sharp at no cost to you but carrying charges. When reamers get dull send them prepaid and direct to us, including return postage, and they will be sharpened and returned to you the same day received. We maintain a special department for this service. Be sure you get Sioux Reamers if you want Sioux Service. Keep an extra set of Sioux Reamers on hand for use while the other set is being resharpened—

We make reamers to fit every engine made.

SIOUX
Trade Mark Reg. U.S. Patent Office

Your Jobber Sells Them

ALBERTSON & CO
SIOUX CITY, IOWA

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 6 JUNE 15, 1922 $3.00 A YEAR, 20c A COPY

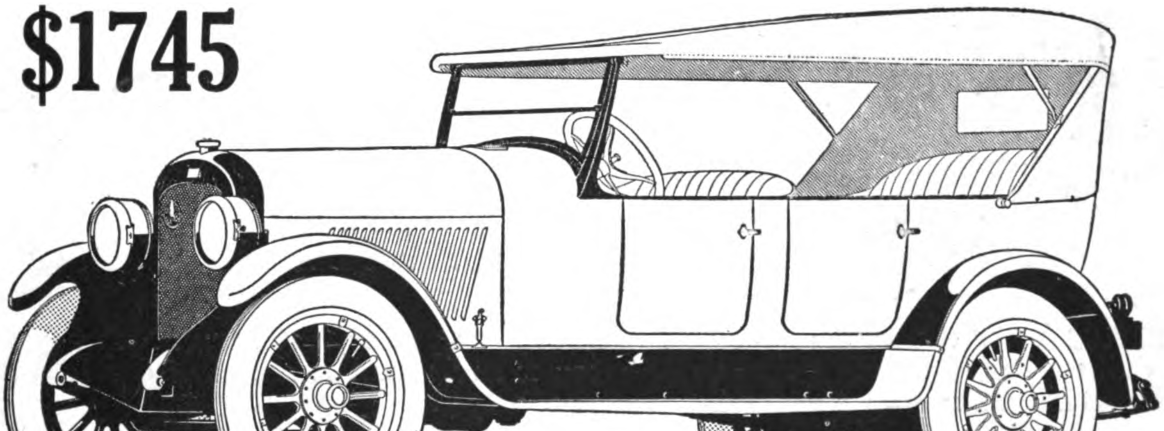
Public L
Trade

Lexington

MINUTE MAN SIX

(Series 22)

$1745

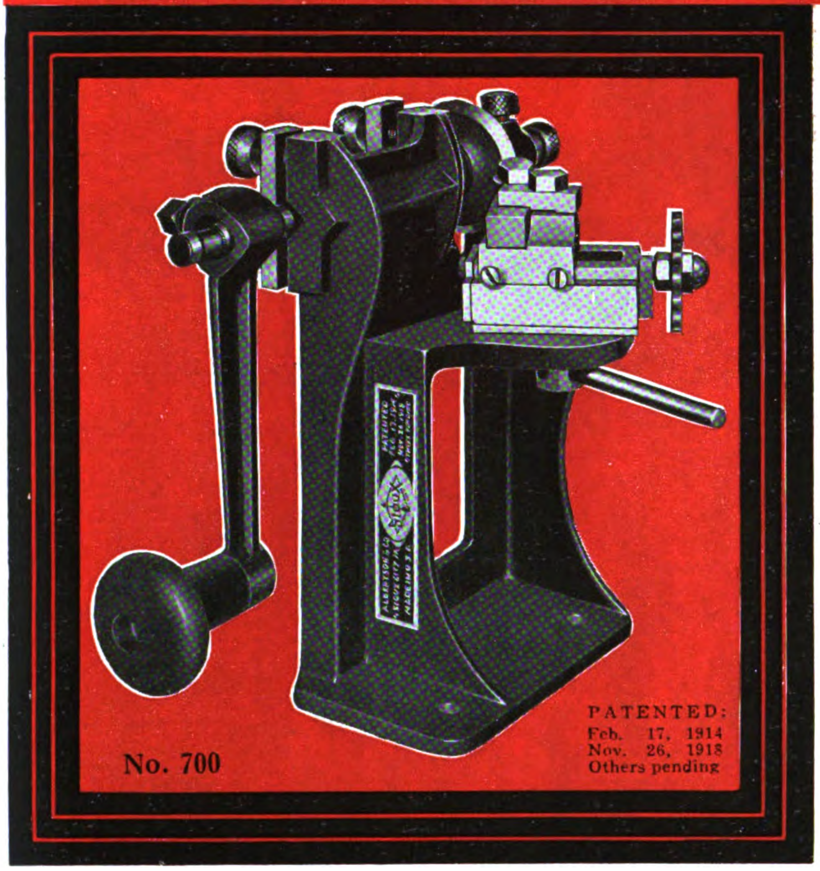


Still an Opportunity for a Few Dealers of the Right Kind!
Since April twenty-third a perfect flood of inquiries has poured into the factory. At that time we advertised "a proposition for 1000 new dealers." *Now we have a plan to help finance new dealers!* No matter what business you are in, *wire or write now!*

Complete Line of Open Models and Closed Cars

LEXINGTON MOTOR COMPANY : : CONNERSVILLE, INDIANA, U. S. A.

"LITTLE SIOUX" VALVE LATHE



Fills a Need in Every Garage

Refaces valves of any size up to 2½ inches. Is simple, self adjusting and absolutely accurate. Even a novice can operate it. Fits in a vise or can be permanently attached to a bench.

Does a perfect job and requires only a few turns of the handle.

Cuts Hardest Steel Valves. No valve is too hard to be cut with a Little Sioux Valve Lathe. It is particularly adapted for cutting Tungsten Steel Valves.

Circular Cutter provides unlimited cutting edges and has ten times the life of an ordinary cutter. Insures a smooth, even face on valve. Leaves no ridges. Made of special alloy of extraordinary hardness and will stay sharp a long time.

Graduation Plate. Has angles 30, 45, and 60 degrees plainly etched on it. Accurately adjusted by simple loosening clamp, moving adjustment lever to proper degree and setting clamp again. Closing lever keeps cutter in accurate line.

Tool Holder is adjustable in or out. No up and down adjustments. Cutter cannot get out of cutting line with valve.

Center Adjustment has positive stop and keeps valves centered while refacing them. When set for certain sized valve it will always be centered for same sized valve.

Two Clamp Devices hold valve stem in perfect alignment. The adjustment lever holds cutter firmly and steadily against valve face.

SIOUX SERVICE keeps cutters sharp for you at no cost except carrying charges both ways. When cutter is dull send it to us and we will re-sharpen it and return it the same day it is received. **Be sure you get Sioux Tools if you want this free service.**

Sold by All Live Jobbers

ALBERTSON & CO. **SIOUX CITY, IOWA**

SIOUX

Trade Mark Reg. U.S. Patent Office

Motor West

THE MOTORING AUTHO[illegible] OF THE PACIFIC COAST

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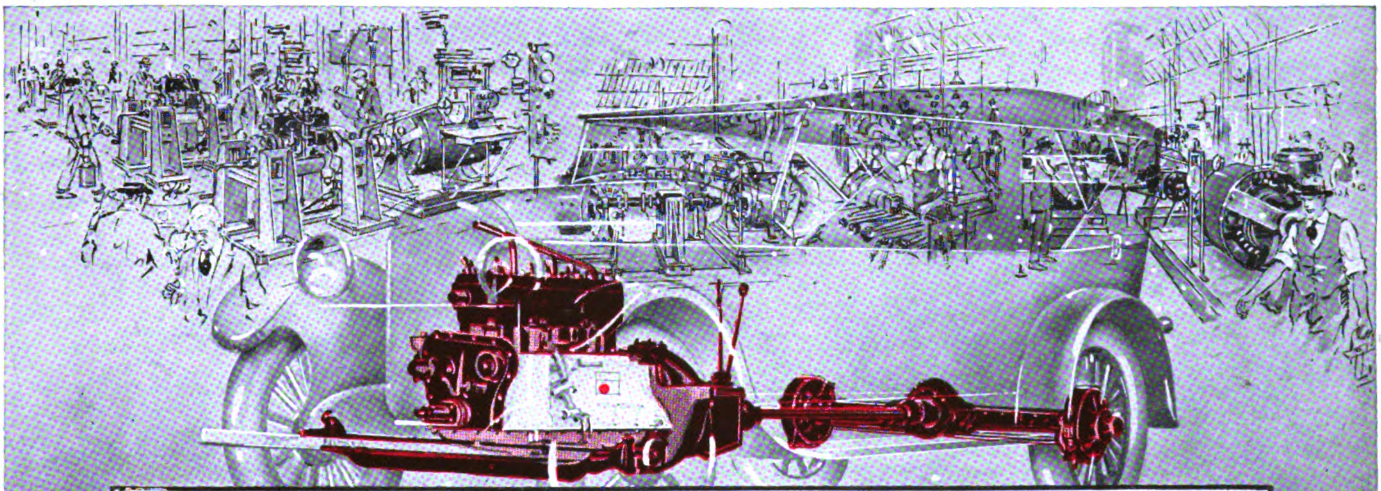


Back of the SPECIALIZED vehicle

Skill and equipment concentrated to a degree not possible in any one organization

Today the car or truck buyer looks not only at the vehicle but, with keen understanding, at the production methods and standards back of it.

The SPECIALIZED car or truck holds his interest because in each of its major units it represents concentration of skill, specialized training and specialized equipment. No lost motion, no dissipated energies—but the undivided and untiring attention of SPECIALISTS to each unit until, in material, in mechanical principle and in operation, perfection is achieved.

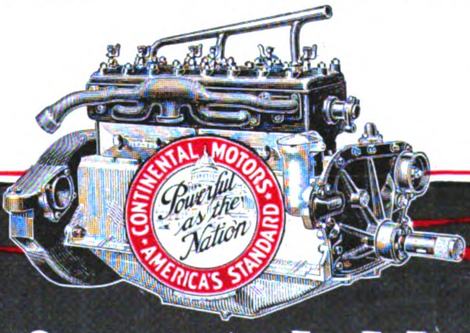
Add to this the efficient distribution of genuine replacement parts in parts-stations throughout the world—and you have the reason for the growing demand, in truck and passenger car markets, for the SPECIALIZED vehicle—the vehicle of *proven* units.

Dealers are rapidly recognizing the advantages of identifying their organizations with the specialized vehicle—the demand for which is sustained by the matchless service of such *proven* units as that recognized standard of motor dependability—the Continental Red Seal.

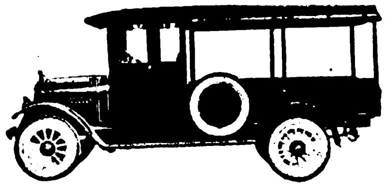
CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U.S.A.
Factories:
Detroit and Muskegon.

Largest Exclusive Motor
Manufacturers in the
World.

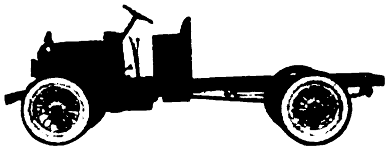


Continental Motors



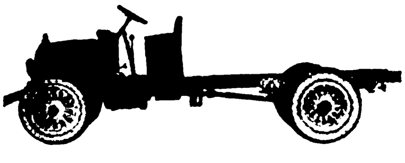
Model 15—2,000 Pounds Maximum

Rapid Transport, fast, speed job, equipped with cord tires, electric lights and starter, seat, wind-shield, fenders and running boards, motometer, speedometer, bumper, extra rim and carrier - - - - **$1295**



Model 25—3,000 Pounds Maximum

Complete with electric lights, front fenders, bumper, radiator guards, hubodometer and motometer - **$1495**



Model 35—4,000 Pounds Maximum

Equipped with radius rods, drive-shaft brake, four-speed transmission, electric lights, Duplex Engine Governor, radiator guards, front fenders, bumper, hubodometer and motometer **$1885**

National Advertising

Campaign on Transports

With the unprecedented increase in Transport Sales—breaking all records for corresponding periods in Transport history—Transport Truck Company opens its 1922-1923 campaign to the truck buying public with National Publicity on a far larger scale than ever before.

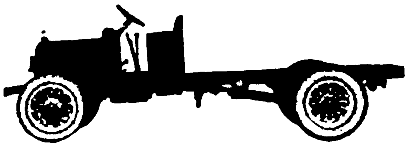
Our National Advertising Campaign pivots on the *Literary Digest* with 1,381,000 circulation, and the *American Magazine,* with 1,643,995 circulation—a total of over three million. Allowing five readers to each copy, the Transport message will reach at least *fifteen million readers every month.* This is the highest grade circulation in America, undoubtedly including every truck prospect in city, town, village and country. The circulation of these magazines among farm people alone exceeds that of some of the big farm papers. See the August *American* and the August 5th issue of *Literary Digest* for our advertisement.

Transport demand, reinforced by the sales power of this advertising, means fast moving and profitable business for Transport dealers.

Send for our proposition on the Transport complete line — a truck for every purpose. Get the facts about Transport quality, organization stability and other factors responsible for this phenomenal success.

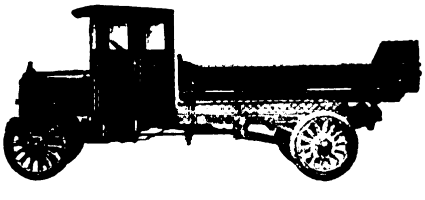
Transport Truck Company, Mt. Pleasant, Michigan

Northwest Transport Truck Co. 510 Railroad Ave., Spokane, Wash.	D. F. Poyer & Son 324 E. Sixth St., Los Angeles, Calif.	D. G. Westbrook 364 Hayes St. San Francisco, Cal.



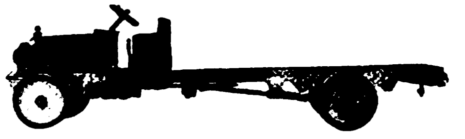
Model 55—6,000 Pounds Maximum

Same equipment as Model 35 - - - - **$2385**



Model 60—7,000 Pounds Maximum

Contractor's Special (Dump) same equipment as Model 35 **$2585**



Model 75—10,000 Pounds Maximum

Same equipment as Model 35 - - - - **$3485**

TRANSPORT TRUCKS

Specialized Trucks-
Every Unit
Nationally Serviced

Jl 26 '22

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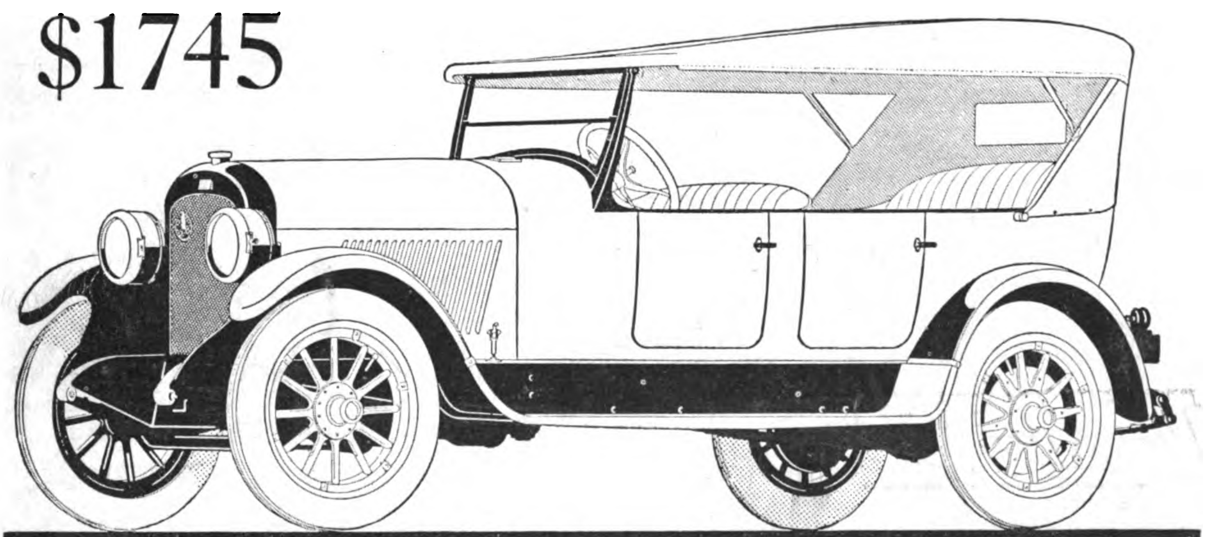
VOL. XXXVII, No. 7 JULY 15, 1922 $3.00 A YEAR, 20c A COPY

Lexington
MINUTE MAN SIX
(Series 22)

$1745

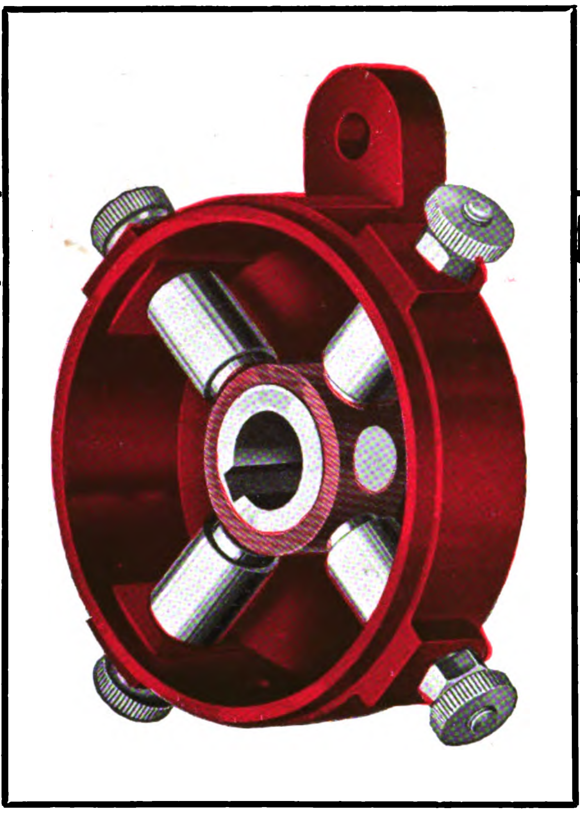


Here They Are! Series 22 Line Now Complete!

Five-passenger Touring, $1745; Six-passenger Touring, $1845; Five-passenger California Top, $2045; Six-passenger California Top, $2145; Five-passenger Sport, $2145; Four-passenger Coupe, $2345; Five-passenger Sedan (with two taxi seats), $2545.

A Wonderful Proposition for Responsible Dealers!

LEXINGTON MOTOR COMPANY : : CONNERSVILLE, INDIANA, U. S. A.



Buying Timers on the Installment Plan

You can buy a lot of timers at prices below that of the DALECO but you will need a lot of them.

The original cost of the DALECO is a little more but it is the ONLY cost and your timer troubles are over.

The man who buys a cheap timer to save a little money is like the man who trimmed his dog's ears a little at a time "So as not to hurt him so much."

He ultimately pays a lot more and constantly suffers from loss of power, excessive gasoline consumption, and the endless annoyance of faulty ignition.

Bear in mind the buyer of a DALECO TIMER is positively guaranteed two full years of faultless Timer service at no additional cost and thereafter for the life of the car at a maximum cost of 50 cents per year.

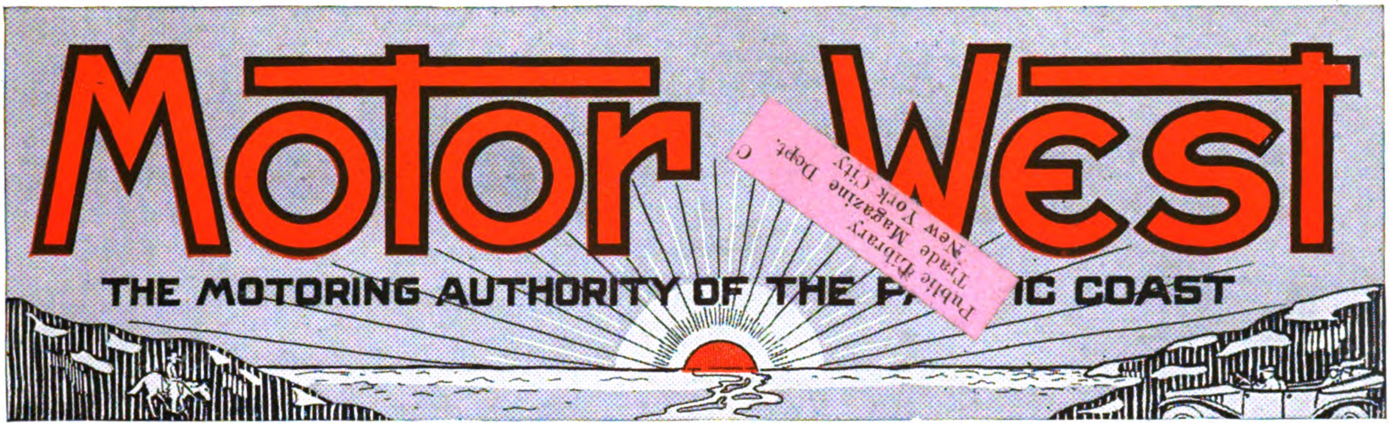
If your motor is "missing" replace it with a DALECO.

DALECO
Trade Mark Registered

Jobbers and Dealers write our sales
department today for full details

Manufacturers
THE DALE MFG. CO.
1323 Michigan Ave.
Chicago, Ill.

Sales Department
THE ZINKE COMPANY
1327 Michigan Ave.
Chicago, Illinois



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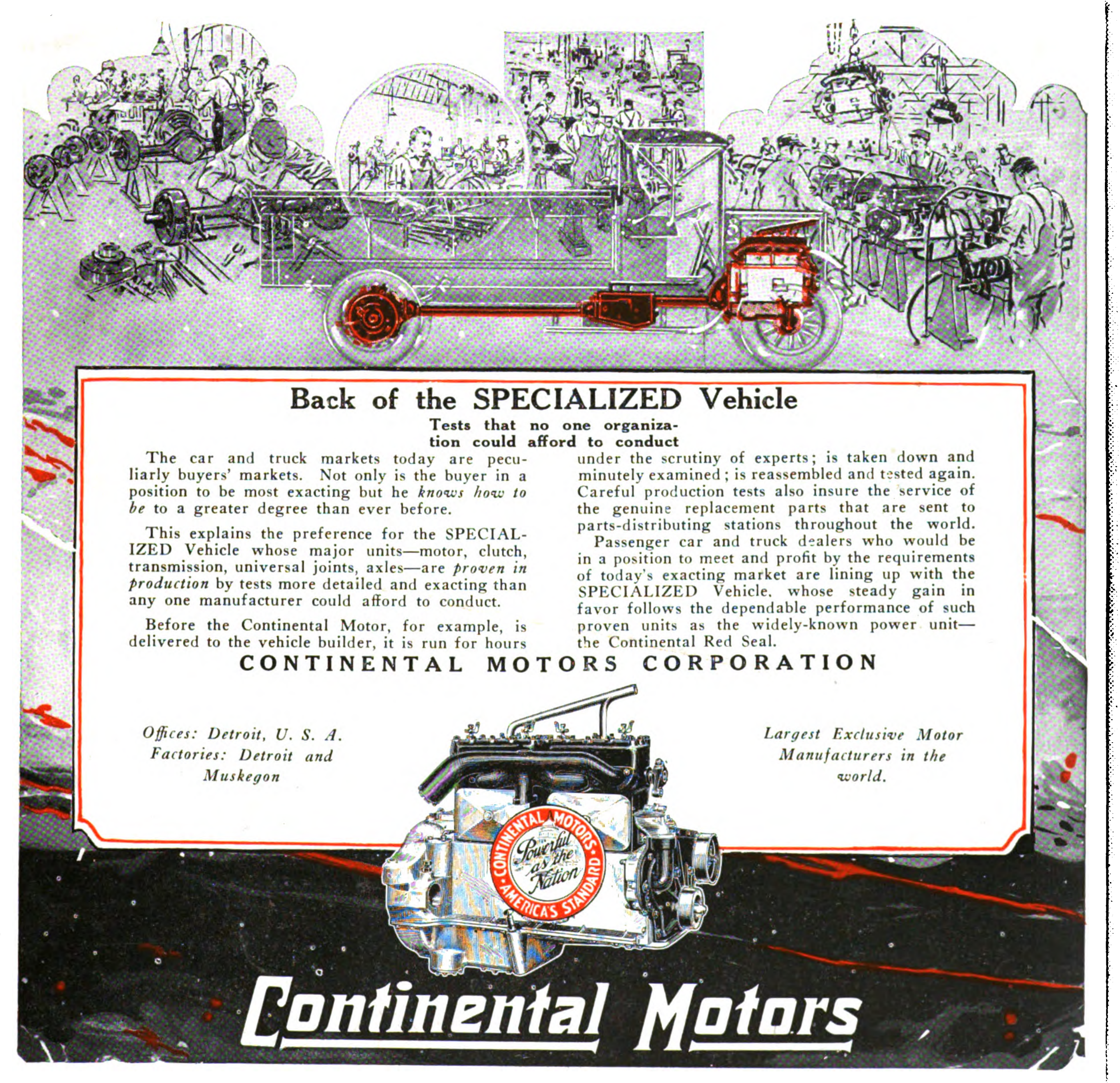


Back of the SPECIALIZED Vehicle

Tests that no one organization could afford to conduct

The car and truck markets today are peculiarly buyers' markets. Not only is the buyer in a position to be most exacting but he *knows how to be* to a greater degree than ever before.

This explains the preference for the SPECIALIZED Vehicle whose major units—motor, clutch, transmission, universal joints, axles—are *proven in production* by tests more detailed and exacting than any one manufacturer could afford to conduct.

Before the Continental Motor, for example, is delivered to the vehicle builder, it is run for hours under the scrutiny of experts; is taken down and minutely examined; is reassembled and tested again. Careful production tests also insure the service of the genuine replacement parts that are sent to parts-distributing stations throughout the world.

Passenger car and truck dealers who would be in a position to meet and profit by the requirements of today's exacting market are lining up with the SPECIALIZED Vehicle, whose steady gain in favor follows the dependable performance of such proven units as the widely-known power unit—the Continental Red Seal.

CONTINENTAL MOTORS CORPORATION

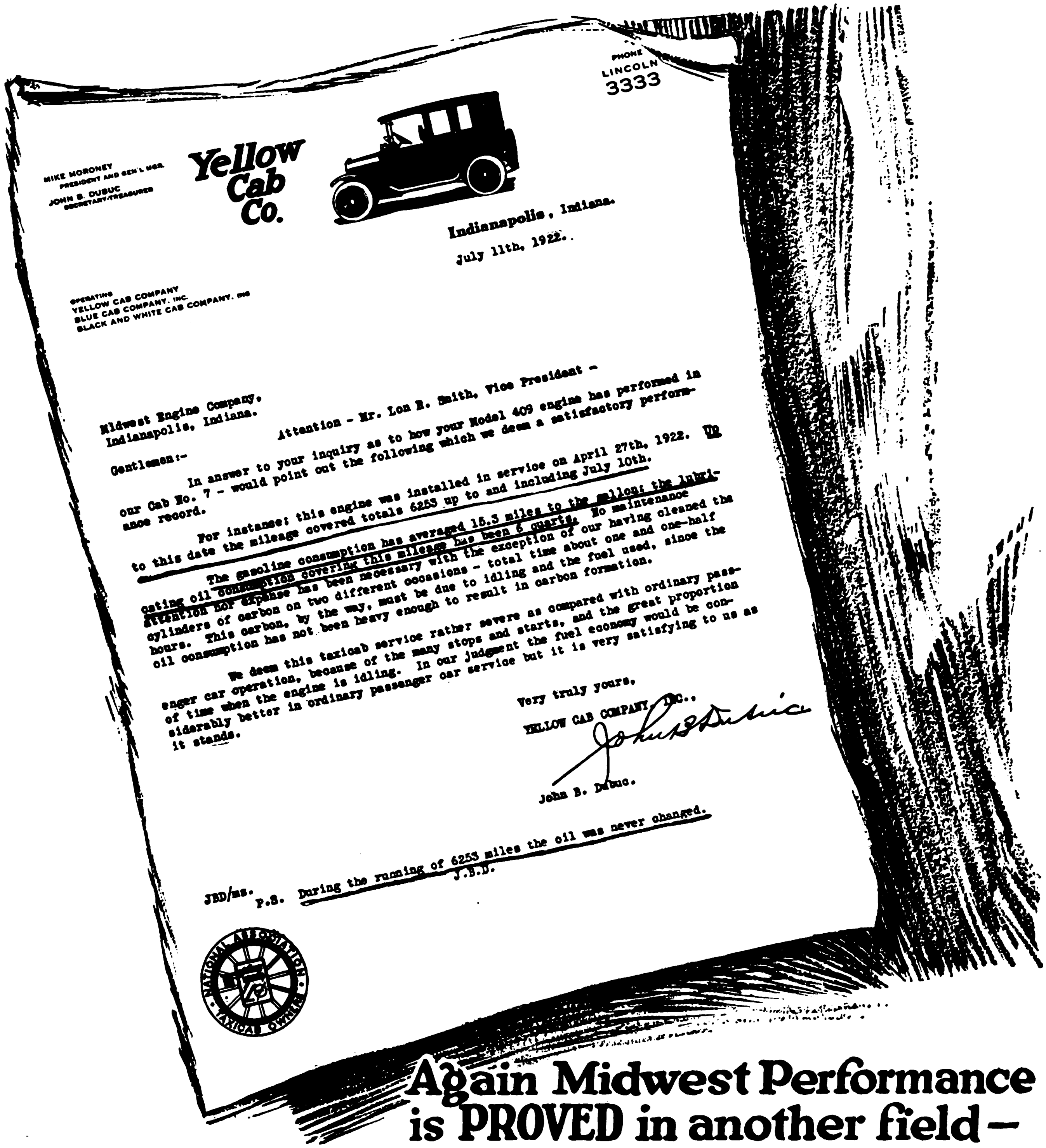
Offices: Detroit, U. S. A.
Factories: Detroit and Muskegon

Largest Exclusive Motor Manufacturers in the world.

Continental Motors

MIDWEST

PASSENGER CAR POWER PLANTS



PHONE
LINCOLN
3333

MIKE MORONEY
PRESIDENT AND GEN'L MGR.
JOHN B. DUBUC
SECRETARY-TREASURER

Yellow
Cab
Co.

OPERATING
YELLOW CAB COMPANY
BLUE CAB COMPANY, INC.
BLACK AND WHITE CAB COMPANY, INC

Indianapolis, Indiana.

July 11th, 1922.

Midwest Engine Company,
Indianapolis, Indiana.

Attention - Mr. Lon R. Smith, Vice President -

Gentlemen:-

In answer to your inquiry as to how your Model 409 engine has performed in our Cab No. 7 - would point out the following which we deem a satisfactory performance record.

For instance: this engine was installed in service on April 27th, 1922. Up to this date the mileage covered totals 6253 up to and including July 10th.

The gasoline consumption has averaged 15.3 miles to the gallon; the lubricating oil consumption covering this mileage has been 6 quarts. No maintenance attention nor expense has been necessary with the exception of our having cleaned the cylinders of carbon on two different occasions - total time about one and one-half hours. This carbon, by the way, must be due to idling and the fuel used, since the oil consumption has not been heavy enough to result in carbon formation.

We deem this taxicab service rather severe as compared with ordinary passenger car operation, because of the many stops and starts, and the great proportion of time when the engine is idling. In our judgment the fuel economy would be considerably better in ordinary passenger car service but it is very satisfying to us as it stands.

Very truly yours,
YELLOW CAB COMPANY, INC.,

John B. Dubuc.

JBD/ms.

P.S. During the running of 6253 miles the oil was never changed.
J.B.D.

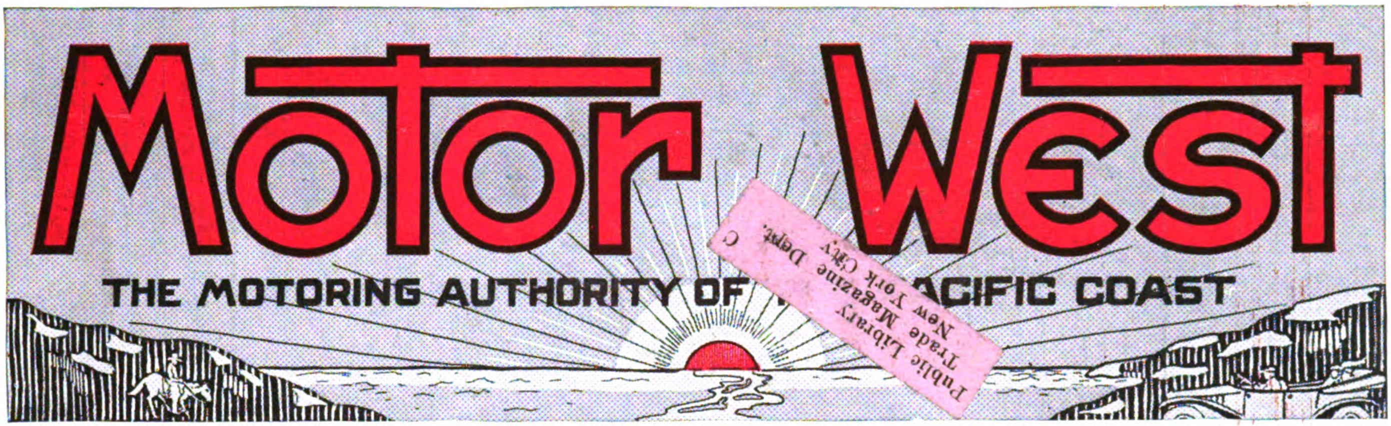
NATIONAL ASSOCIATION TAXICAB OWNERS

Again Midwest Performance is PROVED in another field—

You owe it to the equipment you are marketing to specify, and see that you get a Midwest Engine. Complete literature upon request.

MIDWEST ENGINE COMPANY
Sales Division 12 Indianapolis, U.S.A.

Dependable Power



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THE MOTORING AUTHORITY OF [illegible] ACIFIC COAST

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an announcement of

FALL CLOSED CARS

for Immediate. Delivery

Lexington

MINUTE MAN SIX

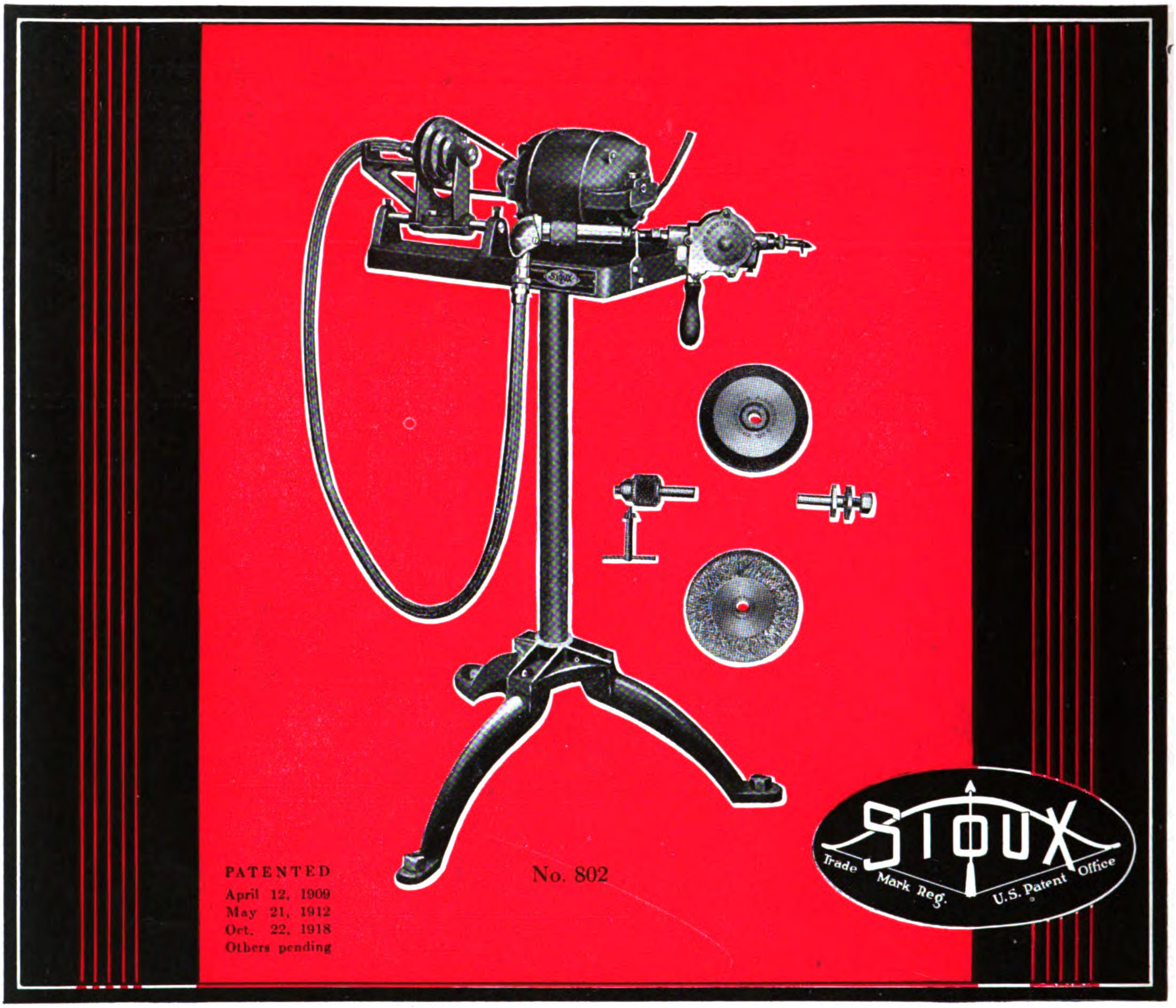
Series 22 Coupe, $2345—Series 22 Sedan, $2545

Harmonious Colors—Luxurious Upholstery—Elegant Hardware—Ample Ventilation—Excess Roominess—Unusual Driving Vision—Exceptional Riding Ease

Get all the details of our wonderful plan whereby we help to finance new dealers. Write or wire—today

LEXINGTON MOTOR COMPANY :: CONNERSVILLE INDIANA U·S·A

Subsidiary United States Automotive Corporation


PATENTED
April 12, 1909
May 21, 1912
Oct. 22, 1918
Others pending
No. 802
SIOUX
Trade Mark Reg. U.S. Patent Office

Takes the Tool to the Work

TRANSMITS the power at point where you want it. Has unlimited uses in every shop. Handy for getting under car or working in cramped quarters. No need to take car apart. Can be driven by an electric drill ½-inch capacity or more, or direct from line shaft, lathe, drill press, emery-wheel stand, or any power that will drive shaft at a speed of 1,000 to 1,725 r. p. m.

Is especially adapted for Emery Wheel Grinding, Drilling, Reaming, Polishing—for Tire Buffing work in Tire Repair Shops and for Valve Grinding. Has a three-speed pulley and a control that enables you to stop and start at will the tool being used.

Liberal Discount to Dealers

If you are interested in cutting your shop costs, get full particulars on this convenient tool for shop work. Your jobber can supply you with literature, or write us direct and we will send it to you post paid.

Sold by All Live Jobbers

ALBERTSON & CO.
SIOUX CITY · IOWA

SIOUX FLEXIBLE SHAFT ATTACHMENT

MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

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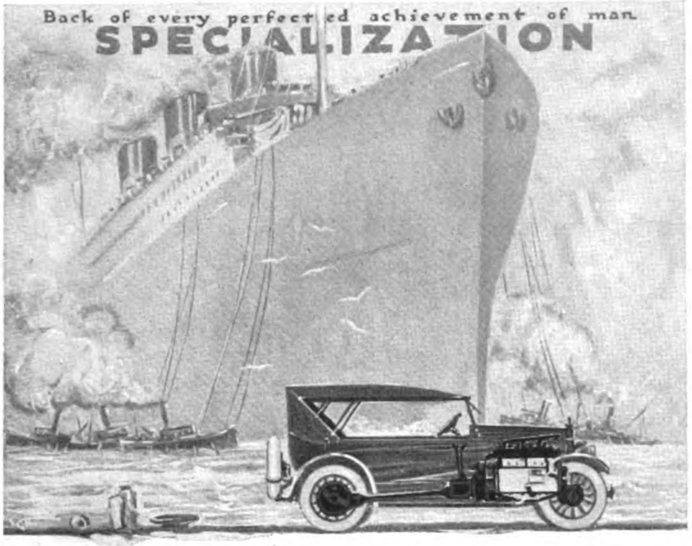
The Reliance Found in the SPECIALIZED Vehicle



Back of every perfected achievement of man
SPECIALIZATION

S. S. *MAJESTIC*—the world's largest ship. 956 feet long. 100 feet wide. 9 decks. 48 boilers. 240 furnaces. Quadruple screws. 100,000 horsepower. Capacity 4,100 passengers.

The S. S. *Majestic* is the achievement of literally thousands of engineering firms, contractors and sub-contractors each a specialist in a particular line.

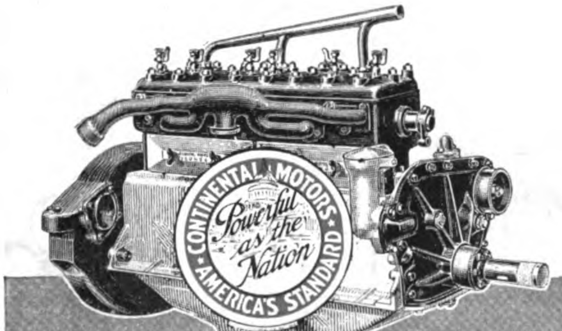
BOTH travelers for pleasure and shippers of merchandise are conscious of a feeling of absolute reliance in such a specialized construction as the *S. S. Majestic.* They know that each vital part of the great ship is the product of a marine, mechanical or electrical engineering force fitted by intensive training to perfect the highest possible development of each specialized part.

SPECIALIZED Vehicles, with each of their vital parts a specialized unit, warrant the same feeling of absolute reliance.

You know that the performing units of a SPECIALIZED car or truck—the motor, transmission, universal joints, axles, clutch, etc.—are right. You know that the Specialized Vehicle is right. You can rely upon it.

Identify your organization with a Specialized Vehicle because it is the car or truck the public trusts. It is the one they buy. It is the one that gives the most that money can buy in the automotive industry. Uninterrupted performance is assured the Specialized Vehicle through convenient parts-distributing stations throughout the world.

Remember this: the certain identification of *motor* specialization is—the Continental Red Seal.



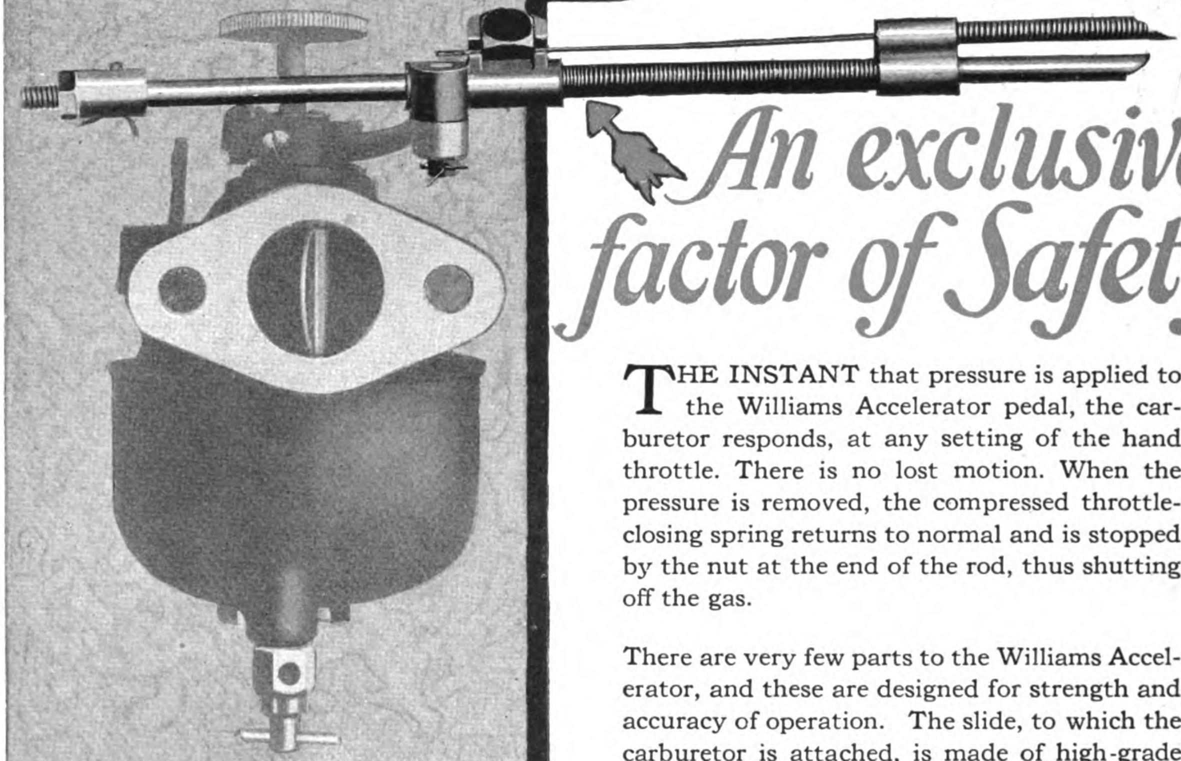
CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U. S. A. Factories: Detroit & Muskegon

Largest Exclusive Motor Manufacturers in the World

Continental Motors

ADVERTISERS' INDEX PAGE [illegible]



An exclusive factor of Safety

THE INSTANT that pressure is applied to the Williams Accelerator pedal, the carburetor responds, at any setting of the hand throttle. There is no lost motion. When the pressure is removed, the compressed throttle-closing spring returns to normal and is stopped by the nut at the end of the rod, thus shutting off the gas.

There are very few parts to the Williams Accelerator, and these are designed for strength and accuracy of operation. The slide, to which the carburetor is attached, is made of high-grade babbitt with a long bearing surface, which assures long service. A few drops of oil, placed occasionally at a point shown by the arrow, is all that is necessary to keep the entire mechanism clean and perfectly lubricated.

* * * *

These are exclusive features of the Williams Accelerator. They provide prompt and positive acceleration. They constitute a factor of safety worth considering.

DEALERS: The above are important selling points.

WILLIAMS BROS. AIRCRAFT CORP.
San Francisco

PRICE AT YOUR DEALER $3.00 AND WORTH IT

WILLIAM'S ACCELERATOR for FORD CARS

Motor West
THE MOTORING AUTHORITY OF THE PACIFIC COAST

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[illegible] SEPTEMBER 15, 1922 [illegible]

Lexington
MINUTE MAN SIX

A BUSINESS OPPORTUNITY

Responsible dealers are invited to write us regarding our Minute Man Finance Plan which makes it possible for them to stock a shipment of Lexingtons on the most equitable plan ever offered by a manufacturer

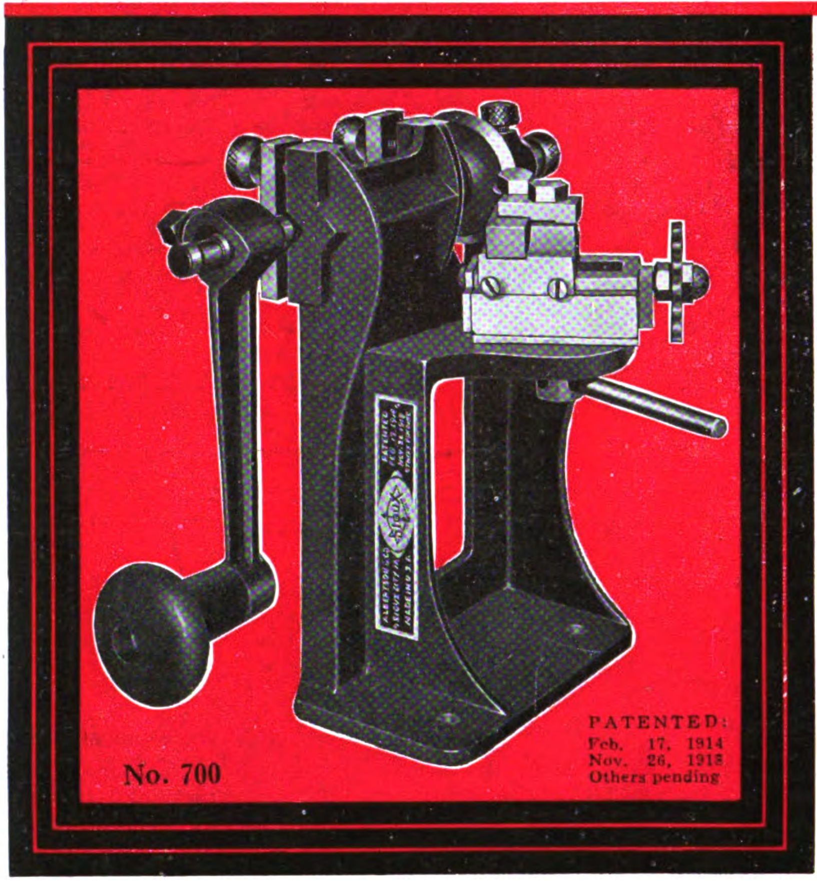
Don't Delay—Wire Now!

Your territory may be open or inadequately covered at the present moment

LEXINGTON MOTOR COMPANY :: CONNERSVILLE INDIANA USA
Subsidiary United States Automotive Corporation

INDEX PAGE 3

"LITTLE SIOUX" VALVE LATHE



Fills a Need in Every Garage

Refaces valves of any size up to 2½ inches. Is simple, self adjusting and absolutely accurate. Even a novice can operate it. Fits in a vise or can be permanently attached to a bench.

Does a perfect job and requires only a few turns of the handle.

Cuts Hardest Steel Valves. No valve is too hard to be cut with a Little Sioux Valve Lathe. It is particularly adapted for cutting Tungsten Steel Valves.

Circular Cutter provides unlimited cutting edges and has ten times the life of an ordinary cutter. Insures a smooth, even face on valve. Leaves no ridges. Made of special alloy of extraordinary hardness and will stay sharp a long time.

Graduation Plate. Has angles 30, 45, and 60 degrees plainly etched on it. Accurately adjusted by simple loosening clamp, moving adjustment lever to proper degree and setting clamp again. Closing lever keeps cutter in accurate line.

Tool Holder is adjustable in or out. No up and down adjustments. Cutter cannot get out of cutting line with valve.

Center Adjustment has positive stop and keeps valves centered while refacing them. When set for certain sized valve it will always be centered for same sized valve.

Two Clamp Devices hold valve stem in perfect alignment. The adjustment lever holds cutter firmly and steadily against valve face.

SIOUX SERVICE keeps cutters sharp for you at no cost except carrying charges both ways. When cutter is dull send it to us and we will re-sharpen it and return it the same day it is received. **Be sure you get Sioux Tools if you want this free service.**

Sold by All Live Jobbers

ALBERTSON & CO. **SIOUX CITY, IOWA**

SIOUX

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MOTOR WEST

THE MOTORING AUTHORITY OF THE PACIFIC COAST

VOL. XXXVII, No. 12 OCTOBER 1, 192 $3.00 A YEAR, 20c A COPY

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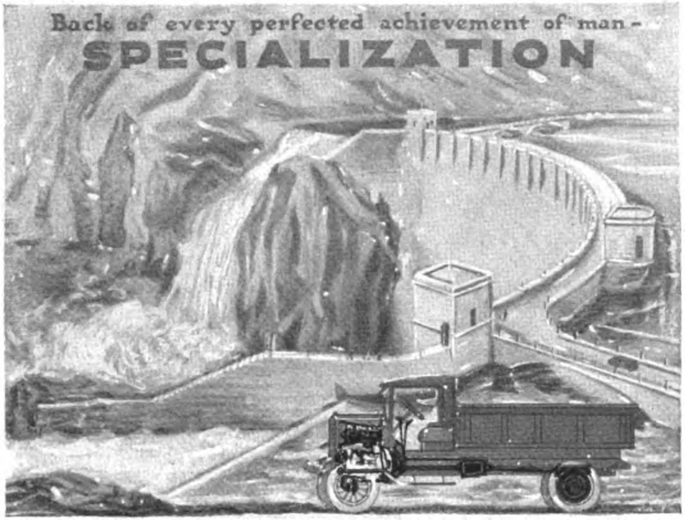
Progress toward Perfection—the Specialized Vehicle


Back of every perfected achievement of man—
SPECIALIZATION

ROOSEVELT DAM—Greatest work of the United States Reclamation Service, Salt River, Ariz. Reservoir contains 61,000,000,000 cubic feet of water. Dam measures 284 feet high, 170 feet thick at base, and 1080 feet wide.

The exacting demands upon the Roosevelt Dam necessitated its construction by the coordinated efforts of many specialist organizations—each contributing an essential factor to the finished undertaking.

The exacting demands made upon present day cars and trucks counsel that each performing unit—motor, transmission, universal joints, axles, clutch, etc.—be the product of an organization of specialists.

Back of the SPECIALIZED Vehicle is the creative genius and experience of the specialist unit manufacturers, the reputation of these manufacturers and the convenience of parts-distributing stations throughout the world.

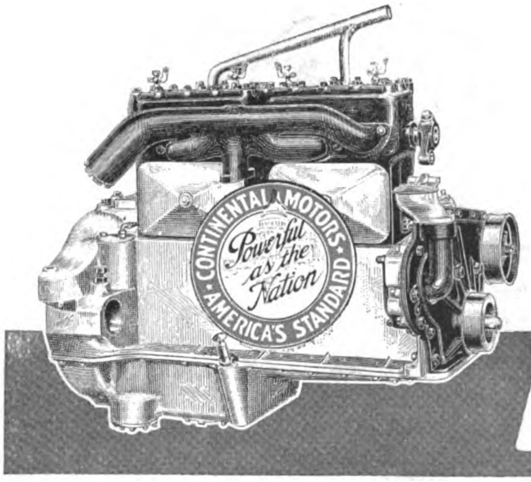
Your organization identified with a SPECIALIZED Vehicle will meet the steadily growing demand of the public for the cars and trucks of uninterrupted performance as given by Specialized Vehicles.

The first assurance of importance to make in considering the SPECIALIZED Vehicle is that upon the crank case of the motor is the leading symbol of SPECIALIZATION—the Continental Red Seal.

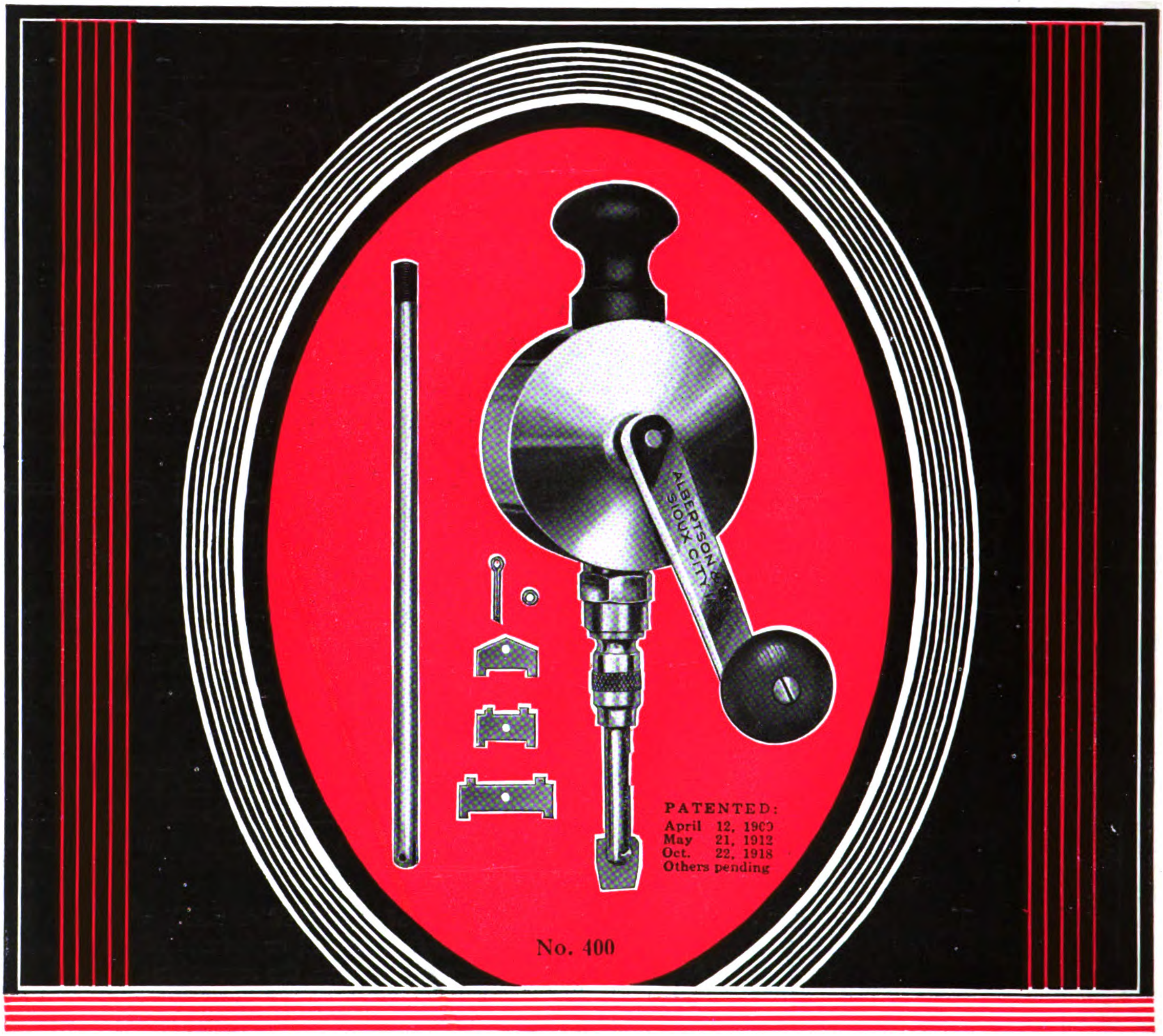
CONTINENTAL MOTORS CORPORATION

Offices: Detroit, U.S.A. Factories: Detroit and Muskegon

Largest Exclusive Motor Manufacturers in the World



Continental Motors


ALBERTSON & CO
SIOUX CITY
PATENTED:
April 12, 1909
May 21, 1912
Oct. 22, 1918
Others pending
No. 400

SIOUX
Trade Mark Reg. U.S. Pat Office

Grinds correctly and quickly. You'll find them everywhere, in garages the world over—giving the utmost satisfaction.

The simple mechanism and the impossible-to-wear-out parts produce that reciprocating, or back and forth motion on the valve, so necessary for perfect valve grinding.

Your Jobber Sells Them

ALBERTSON & CO. **SIOUX CITY, IOWA**

SIOUX VALVE GRINDER

Transport Makes Record Trip Over Road That Sticks 9 Cars!

TRANSPORT'S Complete Line

Model 15—2,000 lbs. Maximum
Rapid Transport, fast speed job, equipped with cord tires, electric lights and starter, seat, wind-shield, fenders and running boards, motometer, speedometer, bumper, extra rim, and carrier **$1295**

Model 25 — 3,000 lbs. Maximum
Complete with electric lights, front fenders, bumper, radiator guards, hubodometer and motometer - - - - - - - **$1495**

Model 35 — 4,000 lbs. Maximum
Equipped with radius rods, driveshaft brake, four-speed transmission, electric lights, Duplex Engine Governor, radiator guards, front fenders, bumper, hubodometer and motometer **$1885**

Model 55 — 6,000 lbs. Maximum
Same equipment as Model 35 - - - - - - - - - **$2385**

Model 60 — 7,000 lbs. Maximum
Contractor's Special, (Dump) same equipment as Model 35 - - - - - - - - - **$2585**

Model 75—10,000 lbs. Maximum
Same equipment as Model 35 - - - - - - - - - **$3485**

Demonstrated performance ability and National advertising are winning widespread recognition for Transport. America's leading distributors are tying to this complete line. Let us give you details.

Transport Truck Company
Mount Pleasant, Michigan

Bruce Motor Truck Co.
Florida Distributors

Tampa, Fla., Aug. 26, 1922

TRANSPORT TRUCK CO.

Gentlemen:

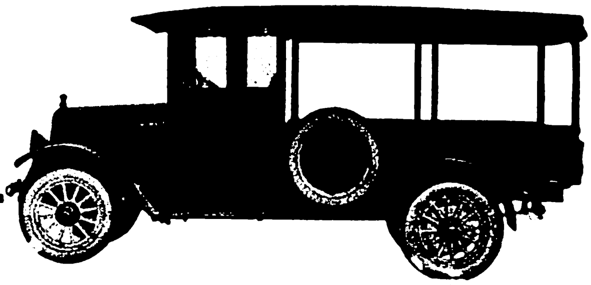
Last Monday our Mr. Johnson and Mr. Nicks left Tampa in a Model 15 Rapid Transport for Ft. Myers. The road from Punta Gorda on is notoriously bad. They were advised not to attempt it, as two weeks of heavy rains had made it practically impassable; but they decided to complete the trip. Enroute they found nine cars and trucks stuck in the mud and abandoned by drivers.

But the Rapid Transport kept pushing right along. They got through to Ft. Myers 177 miles from Tampa in a total of 12-1/2 hours. The gas consumption was 11 gallons, the truck averaging over 16 miles per gallon.

The buyer could hardly believe the truck had made the trip. He insisted on leaving the mud on it for exhibition.

Mr. Nicks who has driven trucks for nine years says he never saw the performance equaled.

Yours very truly,
BRUCE MOTOR TRUCK CO.



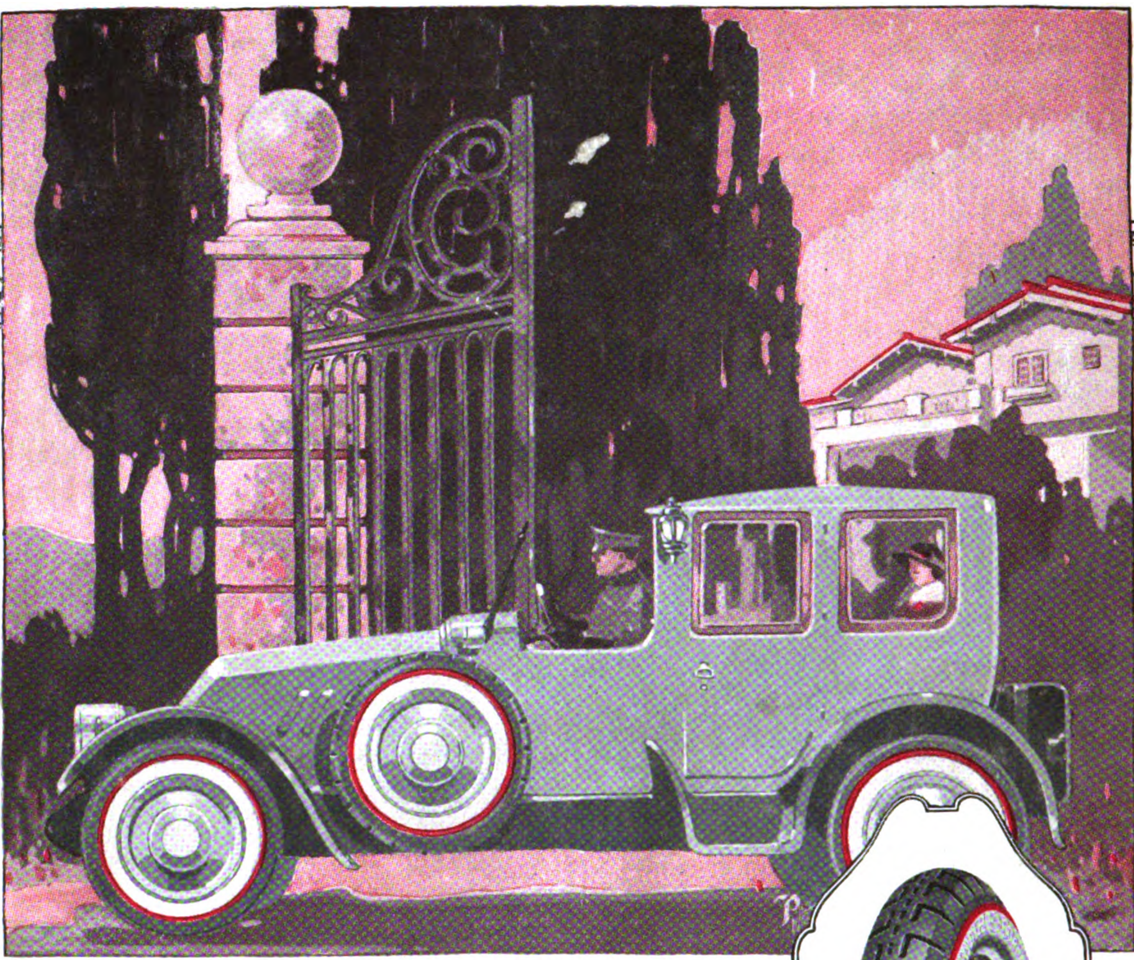
A stock truck Rapid Transport like this made the trip from Tampa to Ft. Myers, 42 miles of the road so bad that 9 other cars and trucks were abandoned.

NORTHWEST TRANSPORT TRUCK CO.
510 Railroad Ave., Spokane, Wash.

D. G. WESTBROOK
364 Hayes St., San Francisco, Calif.

TRANSPORT TRUCKS

Transport is a Specialized Truck. Every unit Nationally Serviced



INDIA-TIRES

Pleasure Insurance

The real value of a tire is determined not alone by its ability to outrun its rivals, but by its ability to give uninterrupted service, day after day, and month after month.

It is this much-to-be-desired quality which has justly earned for India Tires the distinction of being called "America's Best Pleasure Insurance".

Correspondence is respectfully invited from dealers of the better sort—dealers who have an eye single to the continued patronage of their clientele.

INDIA TIRE & RUBBER CO., OF CALIF.,
455 Second Street, San Francisco.

The INDIA TIRE & RUBBER CO.
Akron, Ohio

INDIA

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